The Art of Lettering

and Sign Painters' Manual

A. P. BOYCE

BOSTON

MASS.

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THE ART OF LETTERING,

AND

SIGN PAINTER'S MANUAL.

A COMPLETE AND PRACTICAL ILLUSTRATION OF THE ART OF SIGN WRITING.

By A. P. BOYCE,

AUTHOR OF "THE MODERN ORNAMENTER AND INTERIOR DECORATOR," &c., &c.

FOURTH EDITION.

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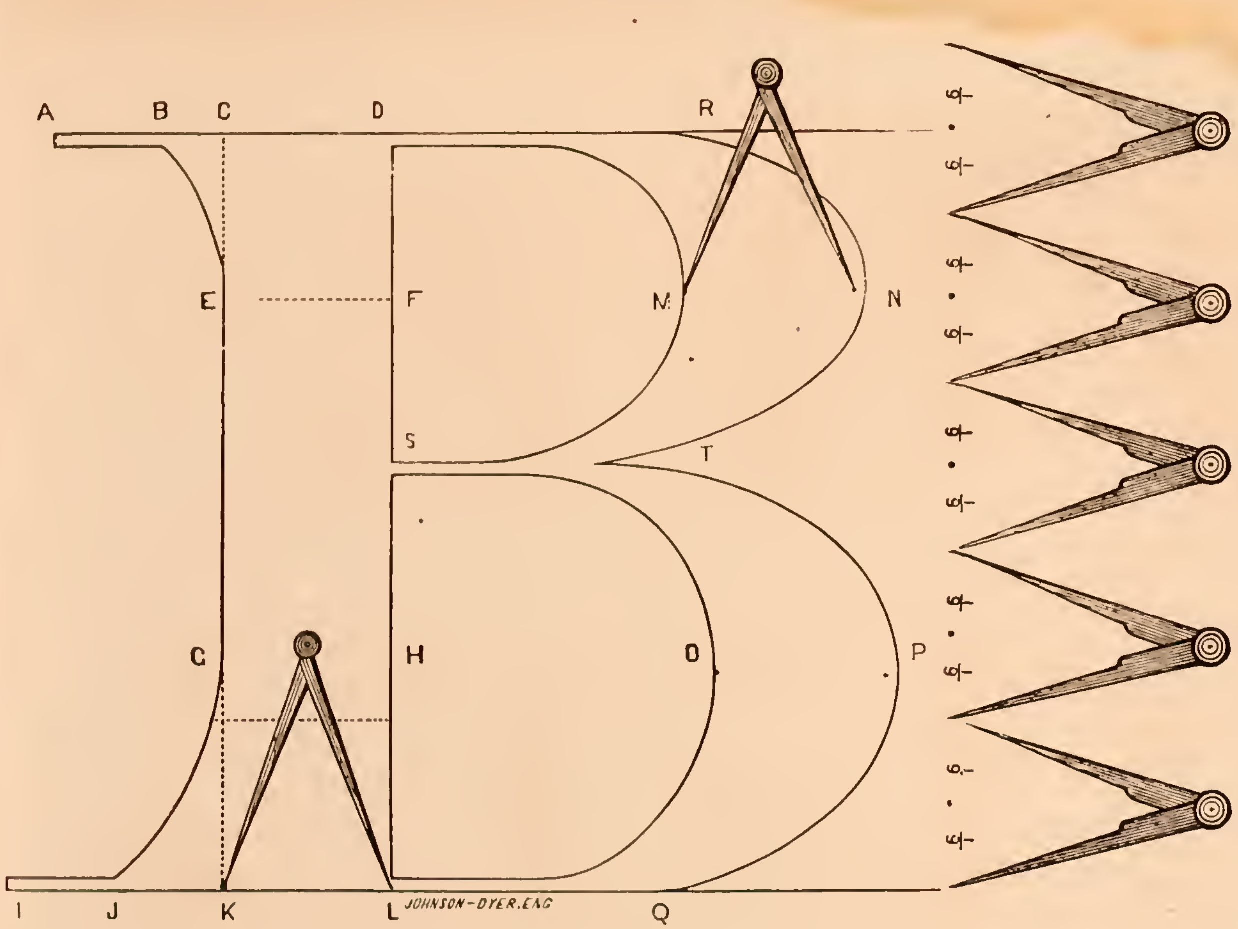


A B I J, Spur.
B E G J, Small curve or grace lines.
R N T T P Q, Large curve.
E F M N, Thickness.
B C J K, Spread of the grace.
D R S T L Q, Hair-line.

The thickness, E F, is two-ninths of the height.

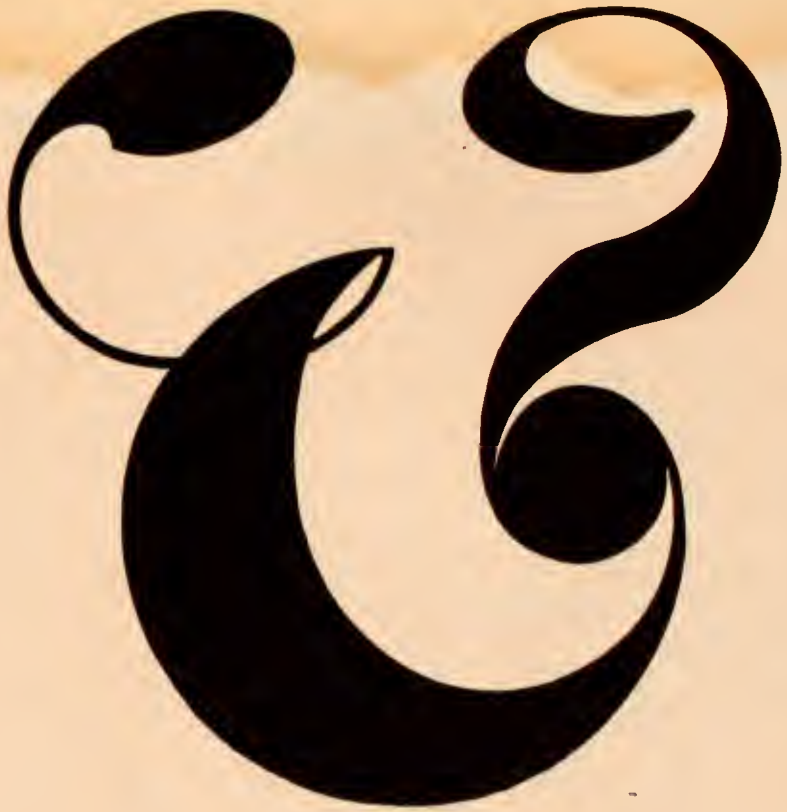
The width, E N G P, is seven-eighths of the height.

The thickness, M N O P, is a little greater than E F G H, on account of the curved lines, which cause the thickness to *appear* less than it really is.

The hair-line, S T, is a little above the centre.

The distance, B C, is a little less, and J K a little more than one-half of C D.

The lower grace, G J, is slightly longer than the upper grace, B E.



CHARACTER "AND."

The circle is about two-thirds of the height.
The thickness is a little more than two-ninths of the height.
The greatest width about equal the height.

The Roman character & is a modification of the Latin word *et*. The left-hand side was the *e*, which it very much resembles now; the right-hand side was the *t*, and although it little resembles that letter at present, the character & of one hundred or two hundred years ago had quite a perfect *t*. The present character is much prettier than the old-fashioned one, which can be seen by comparing the present letter with the Antique or Old Style.

BOSTON FULL ROMAN.

A B C D E

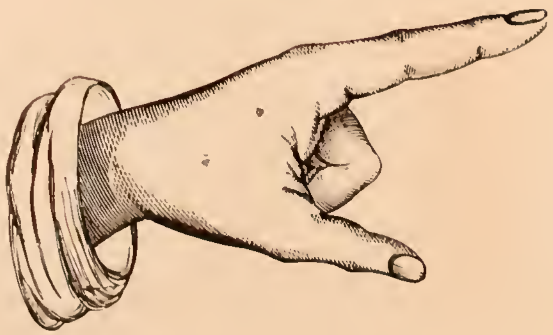
F G H I J K

L M N O

BOSTON FULL ROMAN.

P Q R S T

U V W X



Z Y

BOSTON STRAIGHT ROMAN.

ABCDEFG

HIJKLMN

OPQRSTU

BOSTON STRAIGHT ROMAN.

V W X Y Z

BOSTON ROMAN LOWER CASE.

abcdefghijklmno

pqrstuvwxyz

BOSTON OCTAGON EGYPTIAN.

ABCDEFGHI
JKLMNOPQ
RSTUVWXYZ

BOSTON ROUND EGYPTIAN.

A BCDEFGHI

JKLMNOPQ

RSTUVWXYZ

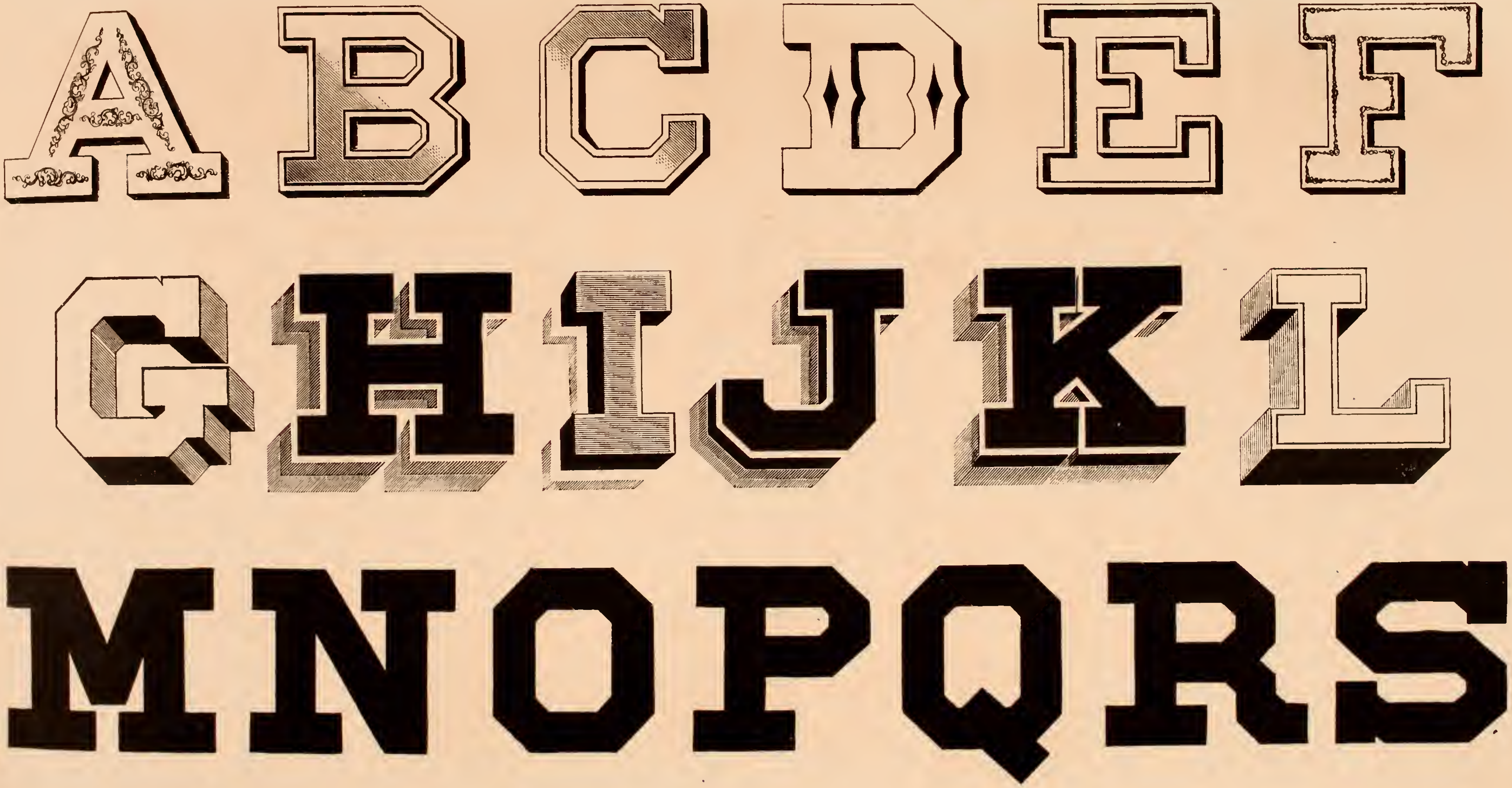
BOSTON EGYPTIAN LOWER CASE.

abcdefghijklmno
pqrstuvwxyz

NEW YORK EGYPTIAN LOWER CASE.

abcdefghijklmnopqr
stuvwxyz

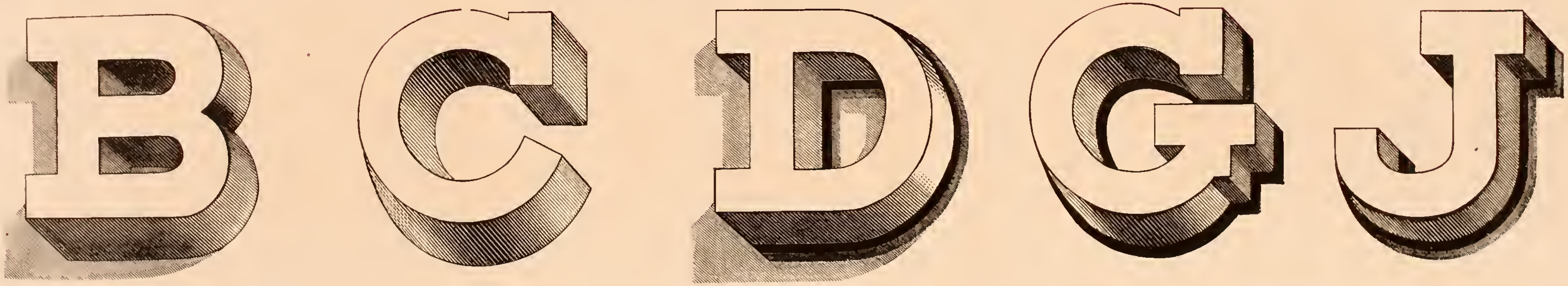
BOSTON OCTAGON FULL BLOCK.



BOSTON OCTAGON FULL BLOCK.

TUVWXYZ

BOSTON ROUND FULL BLOCK.



These are the only letters in the Round Block which differ from the Octagon Block; in all other respects they are identical. (Shades of these letters referred to on another page.)

QPRSU

NEW YORK ROMAN LOWER CASE.

abcdefghijk

lmnopqrsst

uvwxyz

NEW YORK ROMAN.

ABCDEFG

HIJKLMN

OPQRSTU

NEW YORK ROMAN.

V W X X Y Z

NEW YORK OCTAGON FULL BLOCK.

A B C D E F

G H I J K L

NEW YORK OCTAGON FULL BLOCK.

MNOPQR

STUVW

XYZ

NEW YORK ROUND FULL BLOCK.

BCDGJO

These are the only letters in the New York Round Full Block which differ at all from the Octagon Block.

P Q R S U

NEW YORK ROUND EGYPTIAN.

BCDGJQPRSU

The A, G, H, I, and other straight letters of this alphabet will be found in the Boston Octagon Egyptian, with the simple alteration of making the thickness one-fifth instead of two-ninths.

ANTIQUE OR OLD STYLE.

ABCDEFGHIJ
KLMNOPQRSTU
VWXYZ.

abcdef
ghijklmnop
qrstu
vwxyz. 12 & 34567890.

MEDIEVAL.

ABCDEFGHIJK
LMNOPQRSTU
VWXYZ.

abcdefghijklmnopqrstu
vwxyz.

OLD ENGLISH.

A B C D E F G H I J K

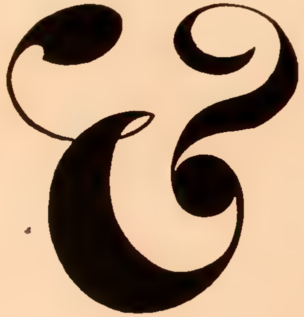
L M N O P Q R S T U V

W X Y Z ,

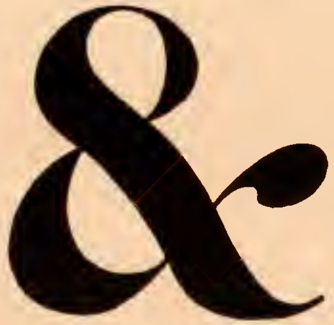
a b c d e f g h i j k l m n o p q r s t

u v w x y z

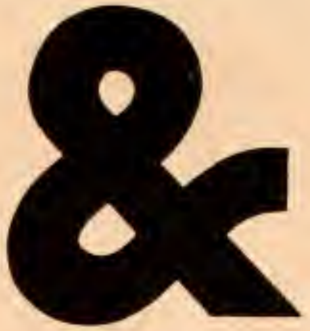
Boston Full Roman.



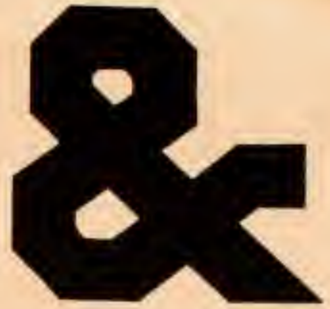
Boston Straight Roman.



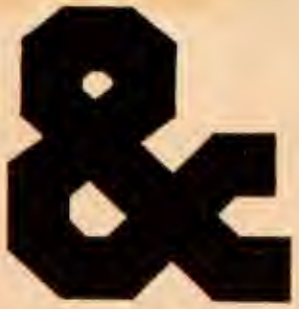
Boston Round Egyptian.



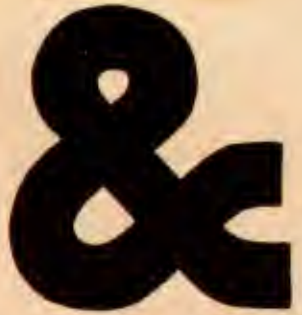
Boston Octagon Egyptian.



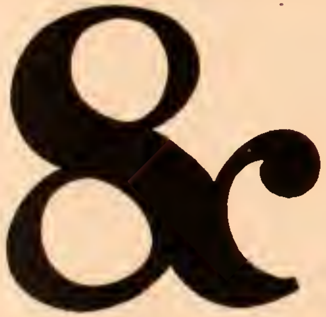
Boston Octagon Full Block.



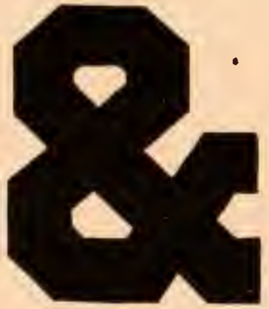
Boston Round Full Block.



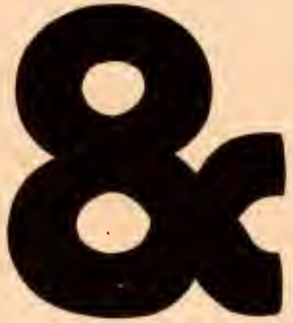
New York Roman.



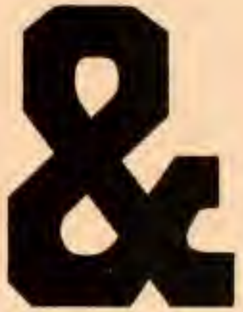
New York Octagon Block.



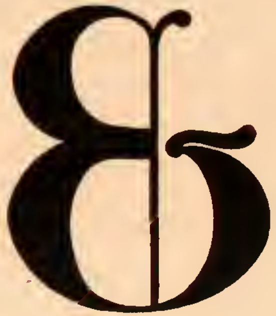
New York Round Block.



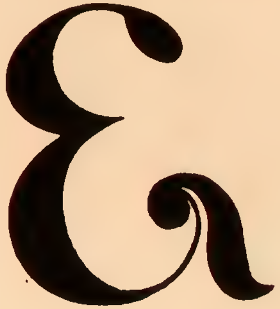
New York Condensed Block.



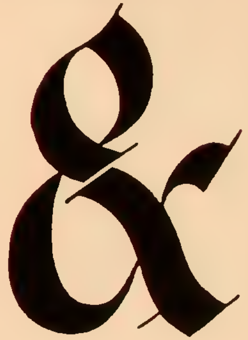
Medieval.

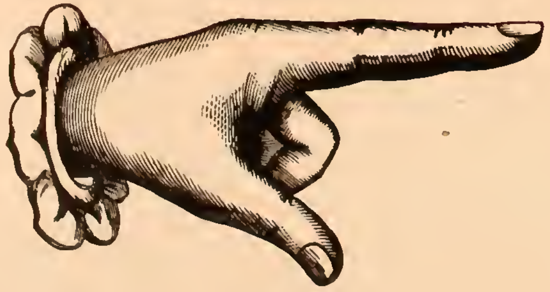


Antique.



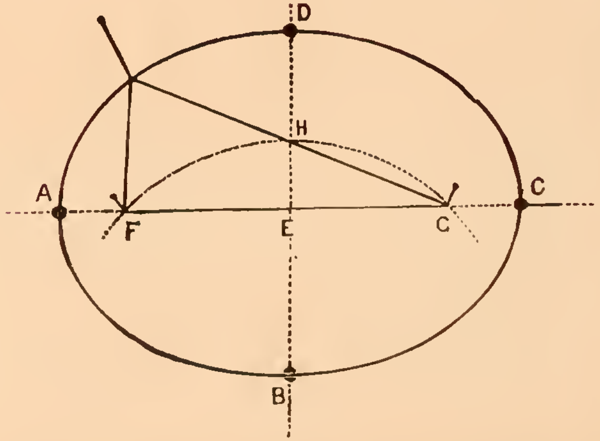
Old English.





DIRECTIONS TO DRAW AN OVAL.

To draw an oval of any given proportions, with string and tacks. Suppose it desirable to pass an oval through the four points A B C D: first draw the horizontal line A E C, then at a point just midway between the points A and C erect the line B E D, exactly perpendicular to it; next set the dividers the distance E C, place one leg on the point B and describe the arc F H G; the two points on the horizontal line where this arc intersects are where the tacks are to be put; around these two tacks a string is to be tied so loosely that a pencil put in the loop will just reach the point B, then by passing the pencil completely around, while guided by the string, the result will be the oval A B C D.



BOSTON ROMAN NUMERALS.

1234567890

BOSTON ROUND EGYPTIAN NUMERALS.

1234567890

BOSTON FULL BLOCK NUMERALS.

1234567890

OLD ENGLISH NUMERALS.

1234567890

ITALIC NUMERALS.

1234567890

ITALIC.

A B C D E F G H I J K

L M N O P Q R S T U

V W X Y Z &

a b c d e f g h i j k l m n o p

q r s t u v w x y z

BULLETIN SCRIPT.

ABCDEFGHIJKLMNOPQR

STUVWXYZ&1234567890

abcdefghijklmnopqrstuvwxyz.

IONIC ITALIC.

ABCDEFGHIJKLMNOPQR

STUVWXYZ.&1234567890

CLARENDON EXTENDED.

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z &
1 2 3 4 5 6 7 8 9 0

TUSCAN EXTENDED.

A B C D E F G H I J K L M
N O P Q R S T U V W X Y
Z 1 2 3 4 5 6 7 8 9 0 &

TUSCAN LOWER CASE EXTENDED.

a b c d e f g h i j k l m n o p q
r s t u v w x y z

ANGLO SAXON TEXT.

A B C D E F G H I J K L M N O P Q R S T U
V W X Y Z &.,
a b c d e f g h i j k l m n o p q r s t u v w x y z

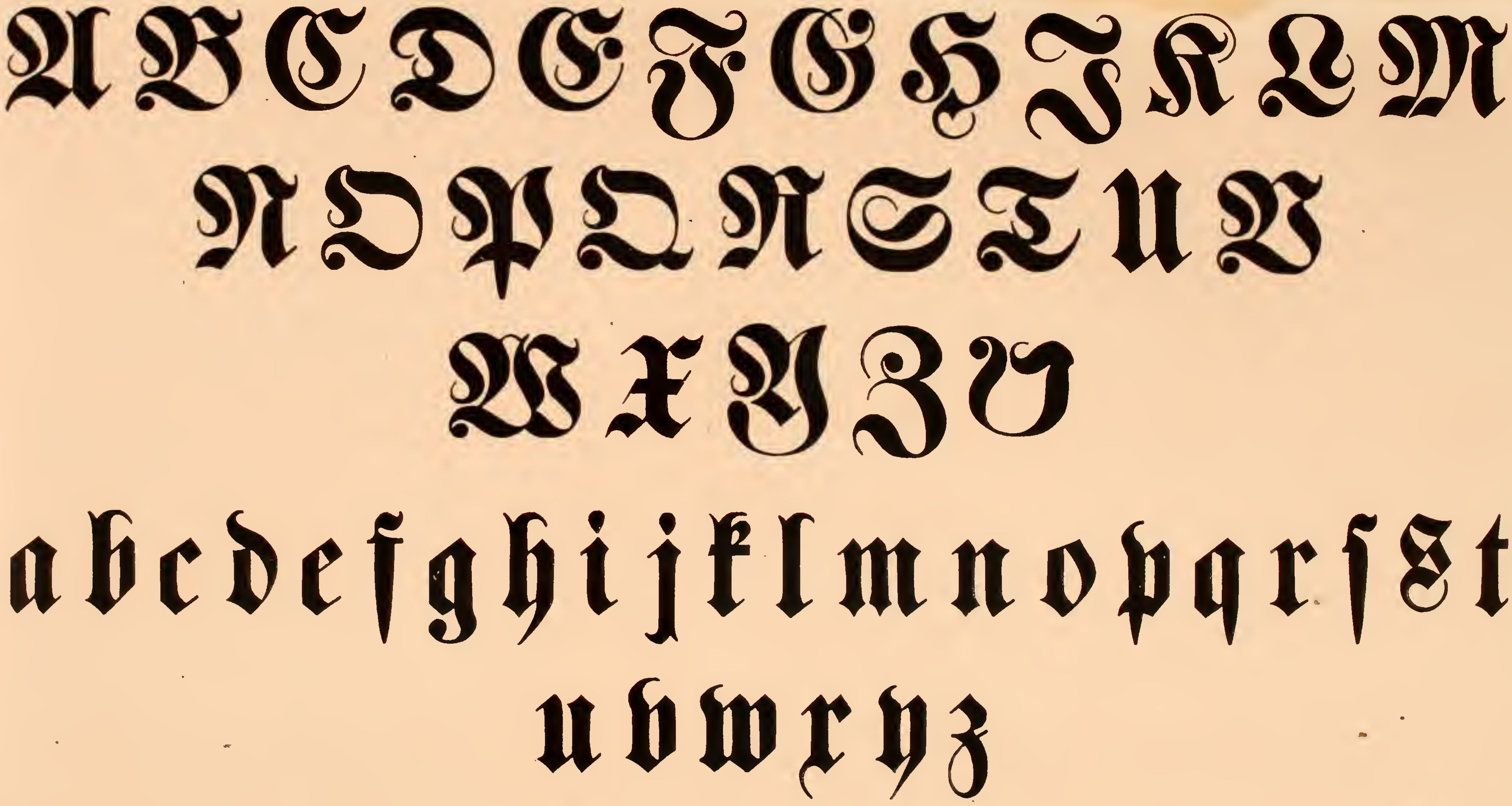
ALLEMANIC.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
1 2 3 4 5 6 7 8 9 0
a b c d e f g h i j k l m n o p q r s t u v w x y z &

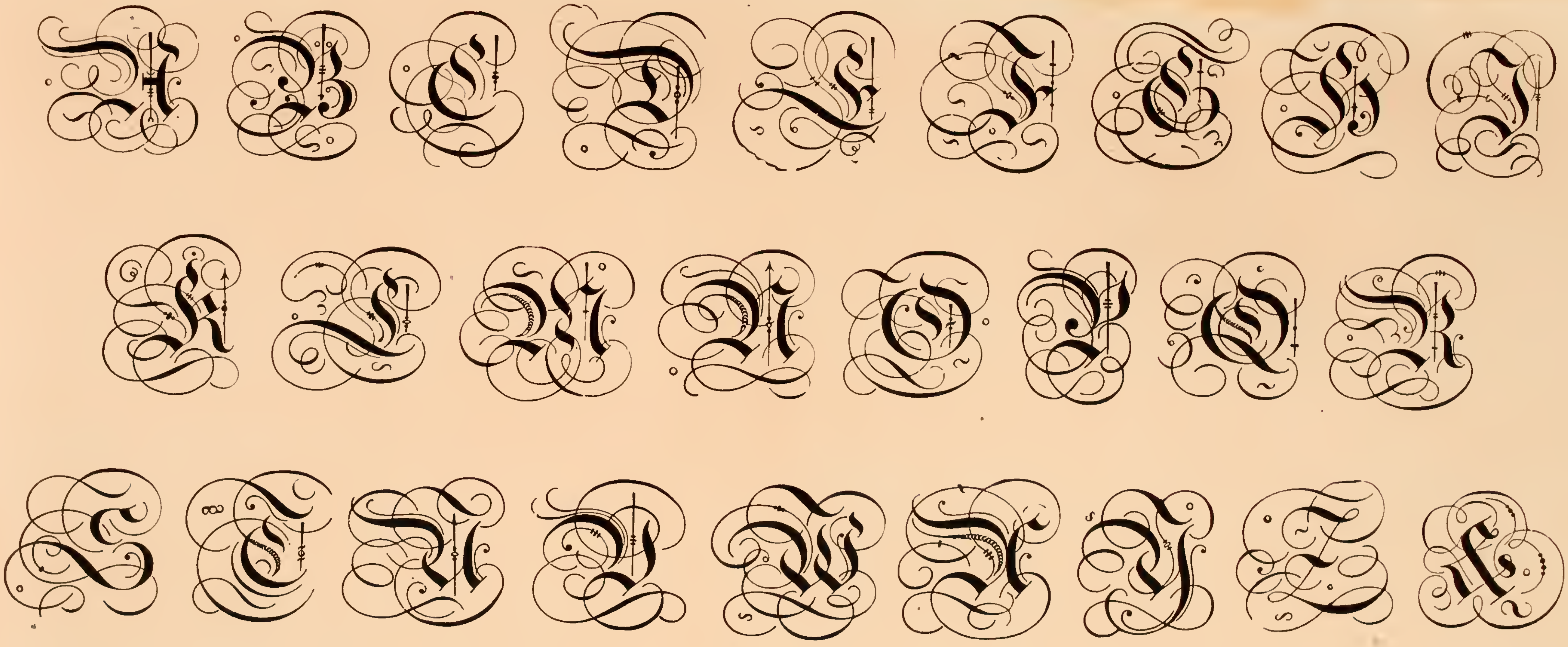
MEDIEVAL.

A B C D E F G H I J K L M N O P Q R S T U V W X Z Y

GERMAN TEXT.

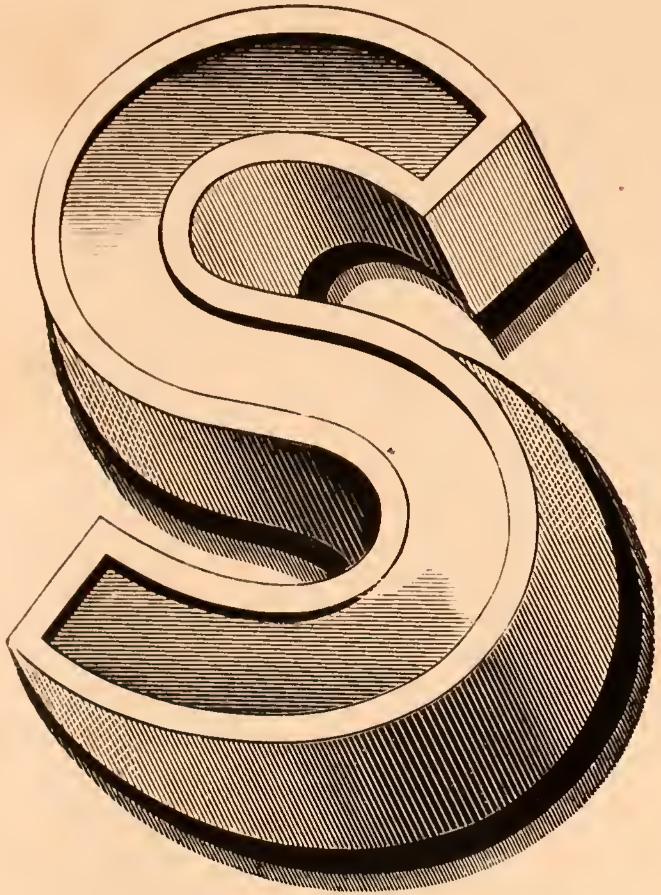

A B C D E F G H I K L M
N O P Q R S T U V
W X Y Z
a b c d e f g h i j k l m n o p q r ſ s t
u v w x y z

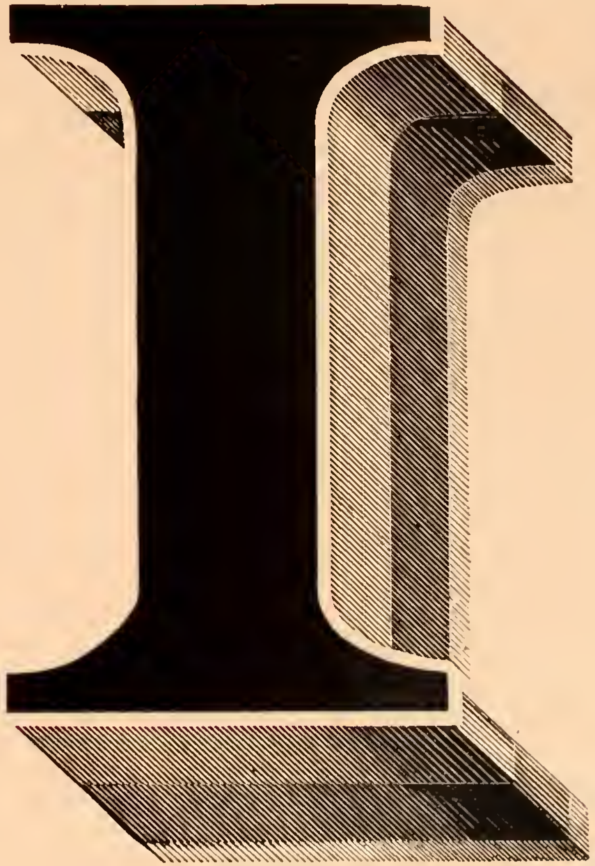
GERMAN TEXT, ORNAMENTED.

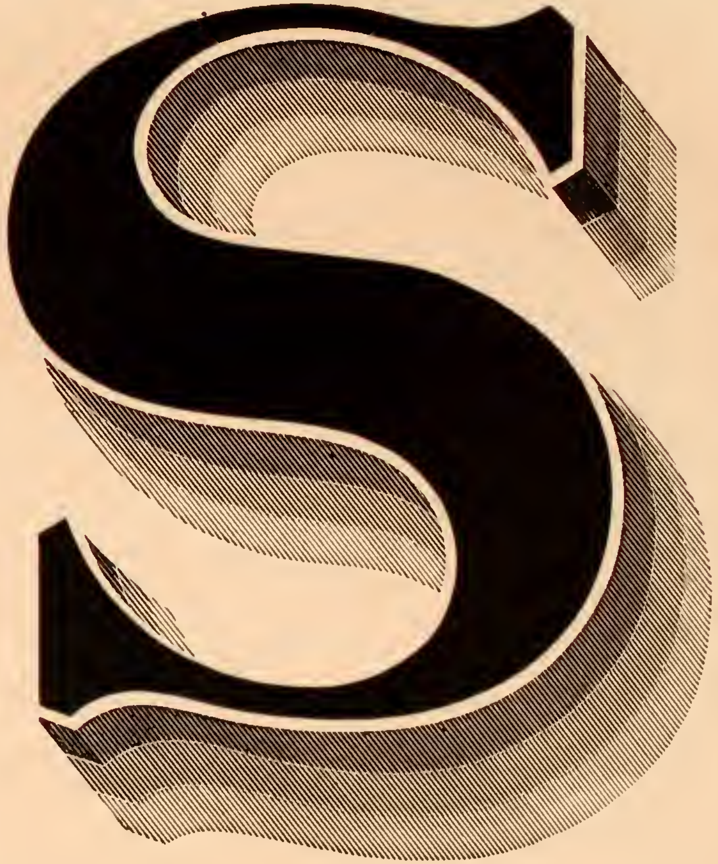

A B C D E F G H I
K L M N O P Q R
S T U V W X Y Z &

a b c d e f g h i j k l m n o p q r s t u v w x y z .

FANCY GRADED SHADE LETTERS.

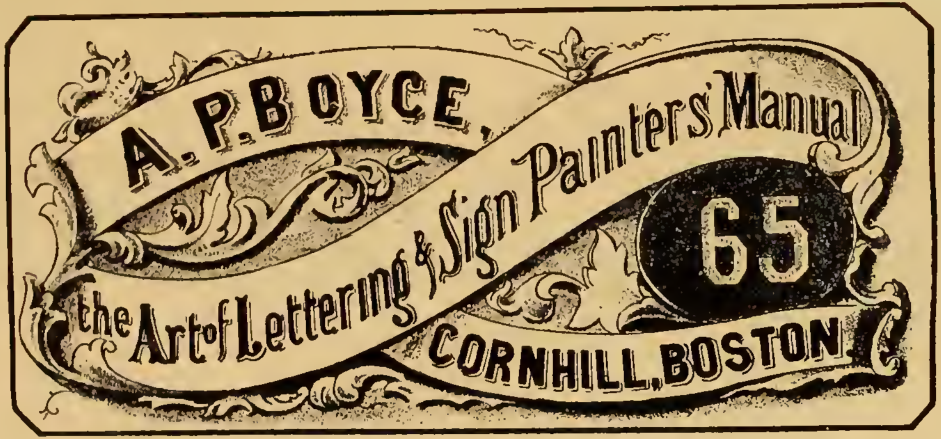






The above letters may be worked up with any colors to suit the taste. The shades of the I and S are usually different tints of the same colors. The management of the Egyptian S is that usually adopted with burnish gilt letters on glass. The outline of the letters is burnish gilt, which is filled in with any brilliant color graded to different tints. The darkest line on the shading is black, and marks the limit of the shade, while the fainter line outside is of Umber or Sienna; between these lines and the letter is the fancy graded shade, of any bright color harmonizing with the other colors used on the letter. The study of this style of shaded letter offers a fine opportunity for the display of taste in colors. An article on shading may be found in another place.

DESIGNS FOR SIGNS.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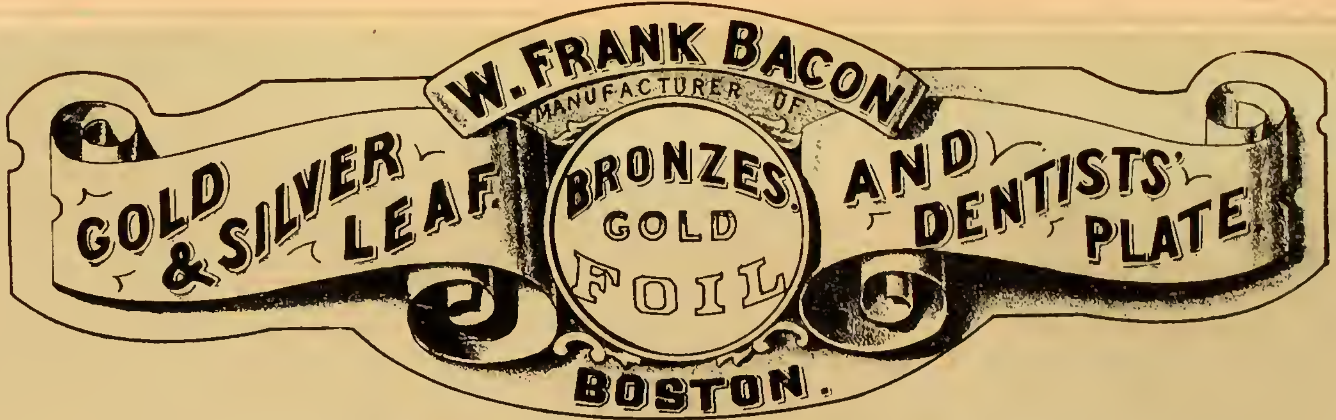
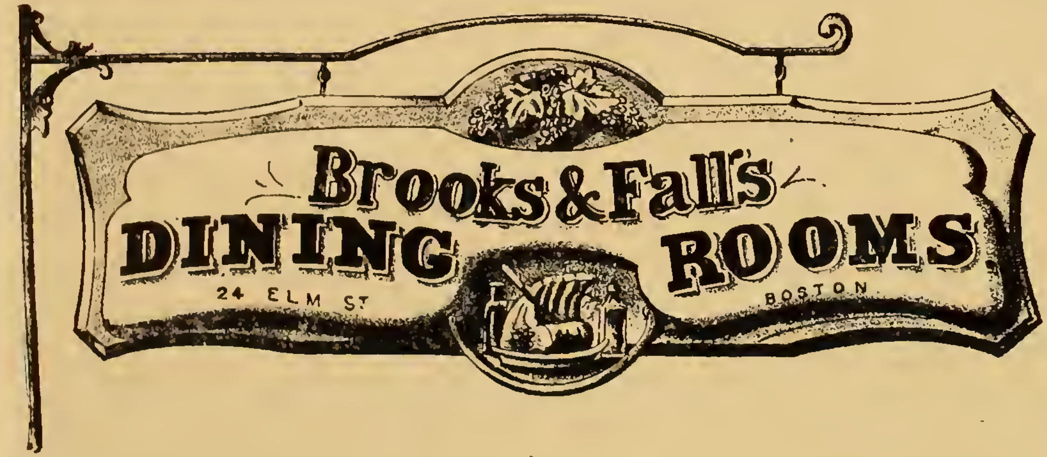
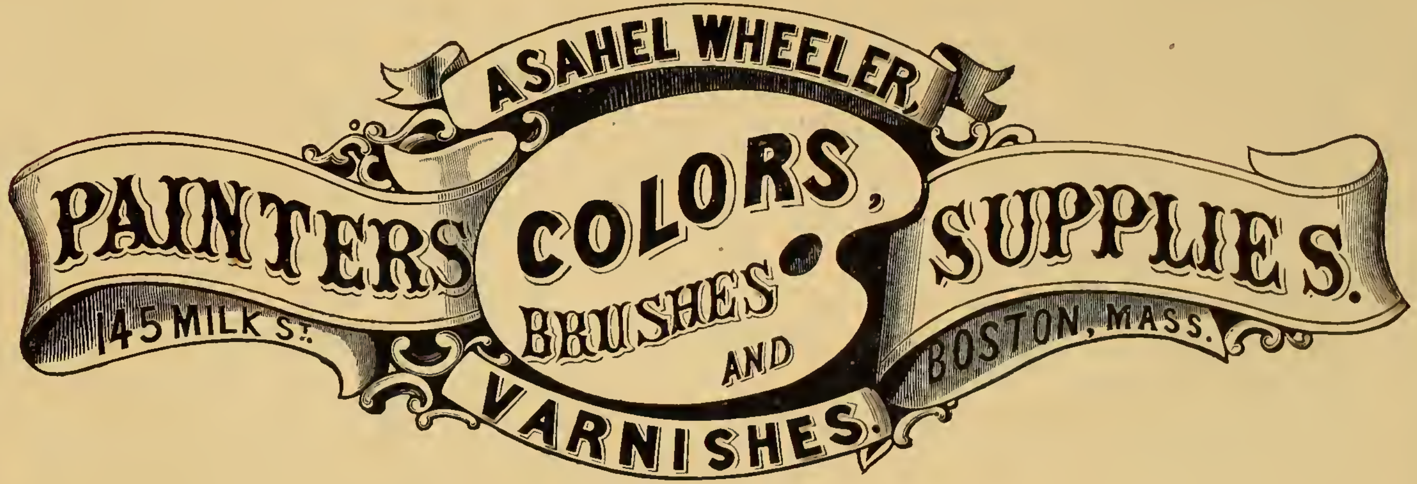
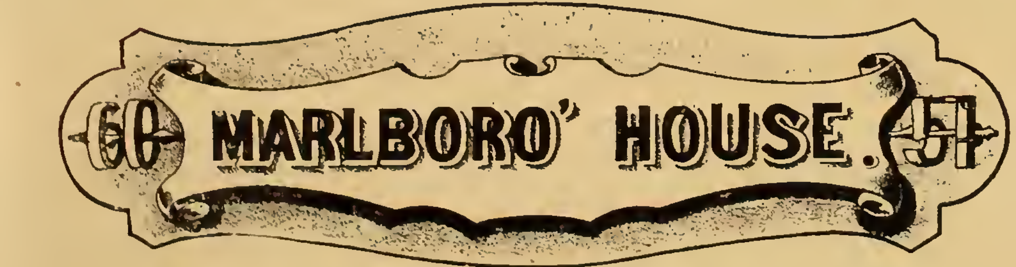
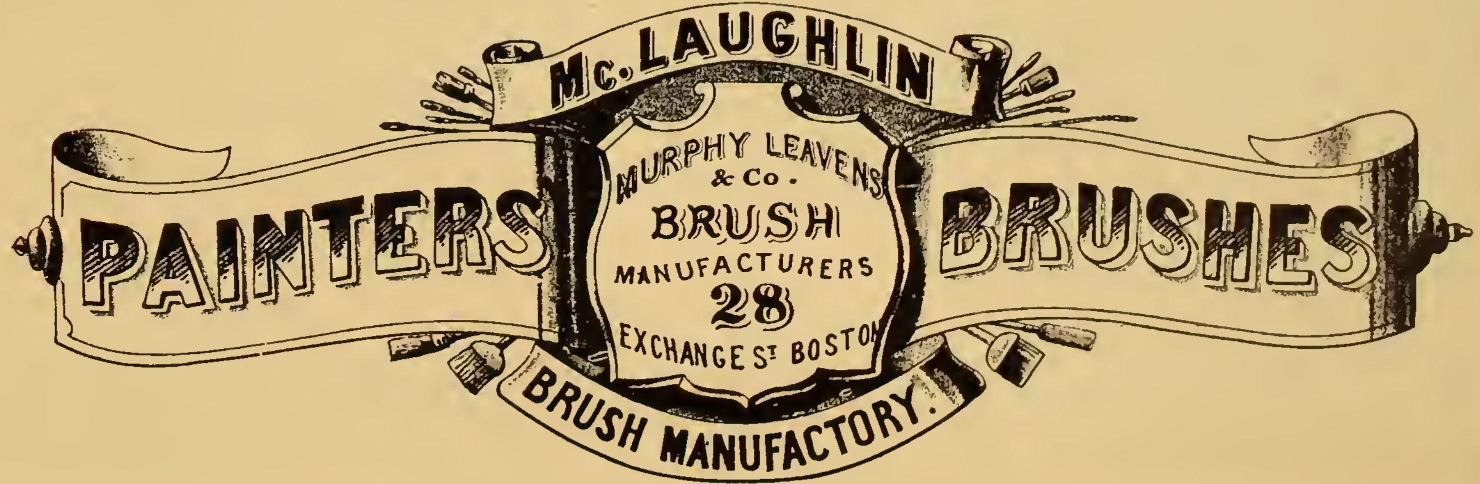
CORNHILL, BOSTON.

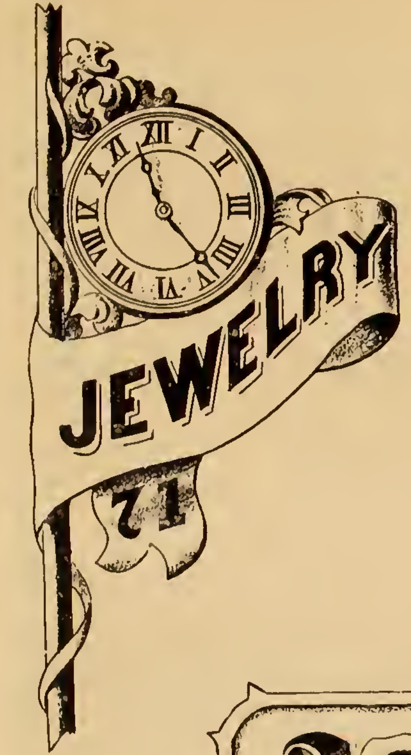


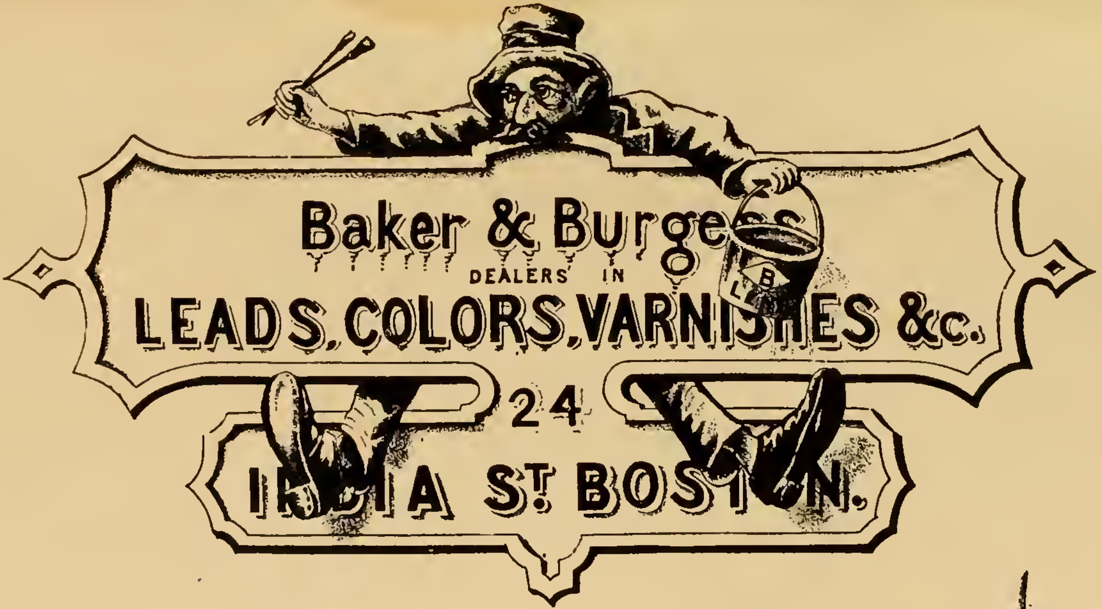


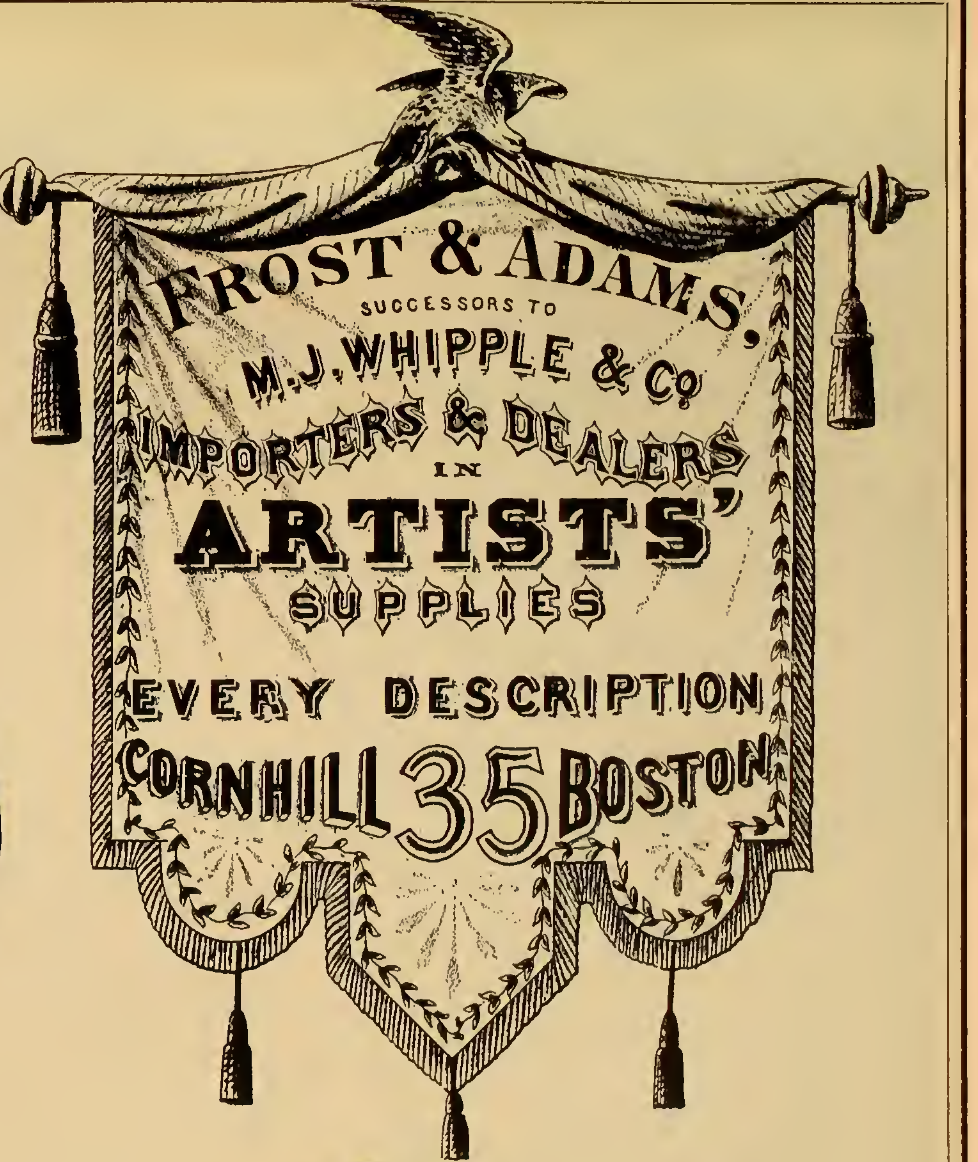







JEWELRY
71


Baker & Burgess
DEALERS IN
LEADS, COLORS, VARNISHES &c.
24
INDIA ST. BOSTON.
L B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SUCCESSORS TO
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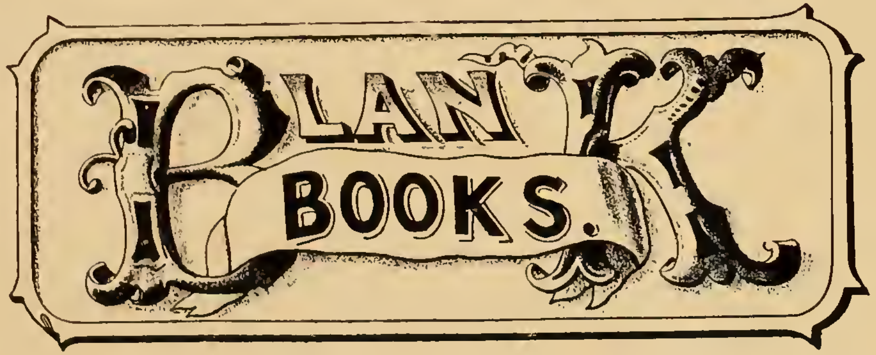
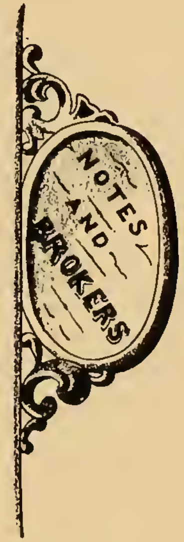
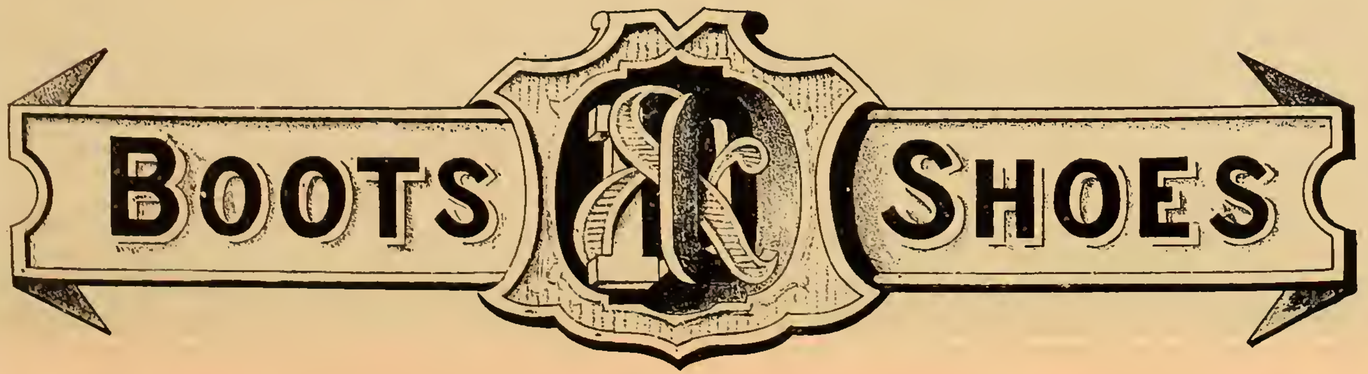
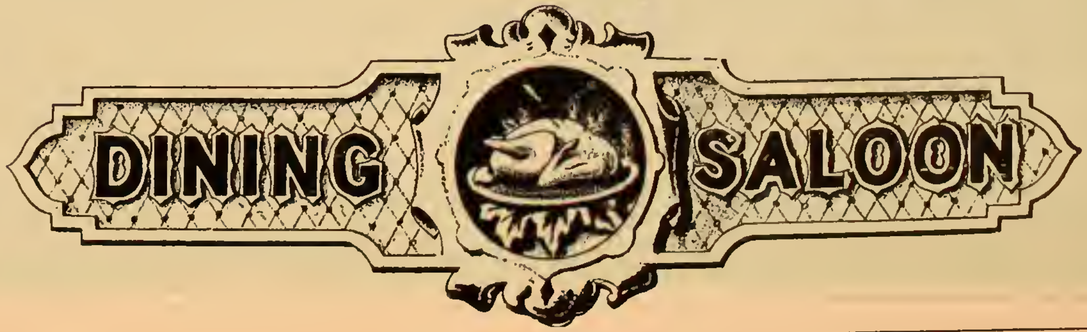
ARTISTS'
SUPPLIES
EVERY DESCRIPTION
CORNHILL 35 BOSTON


BLANK
BOOKS.

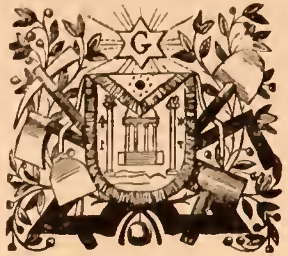
TEAS.

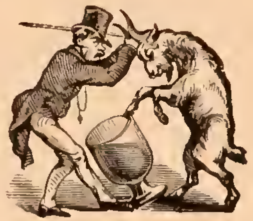

NOTES
AND
BROKERS

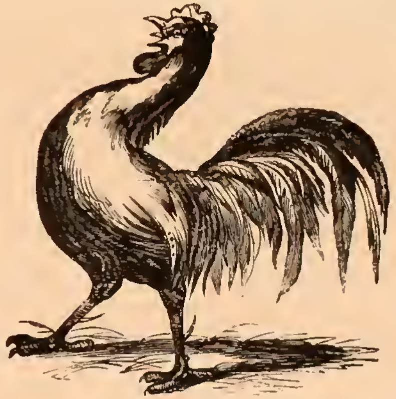

BOOTS
SHOES

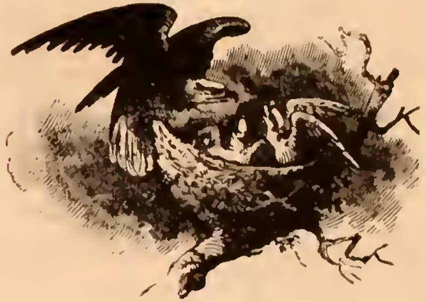

DINING
SALOON

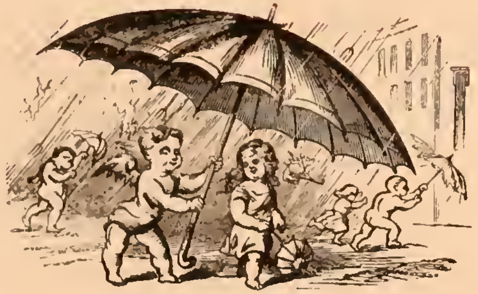
ORNAMENTED DESIGNS.

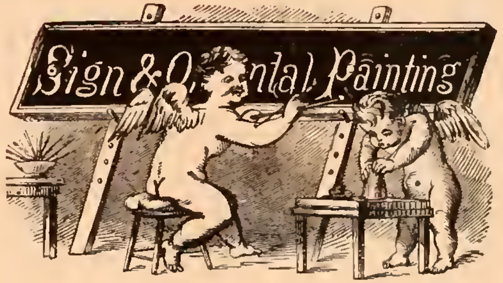


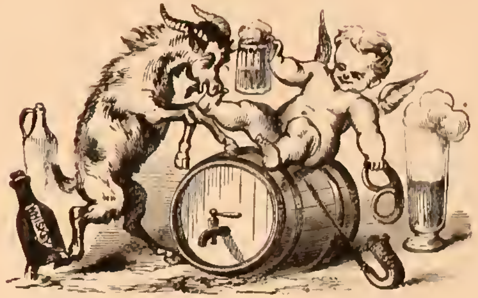


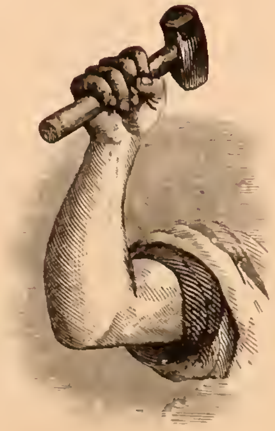


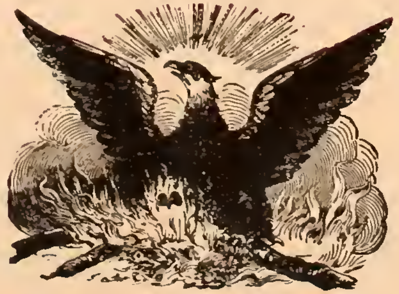


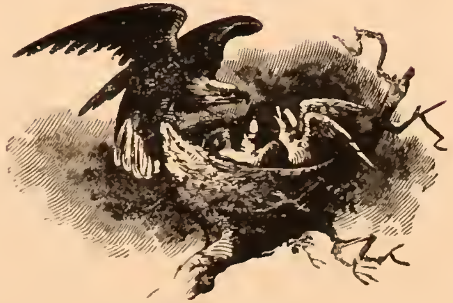


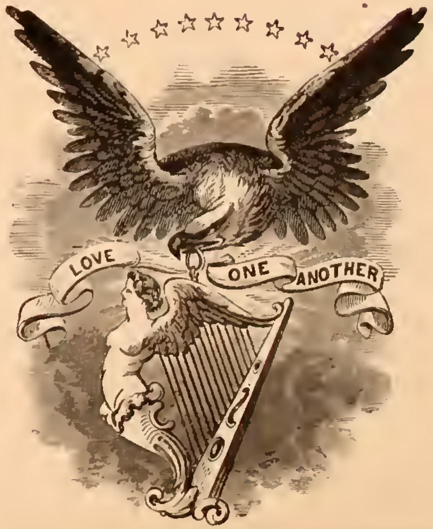




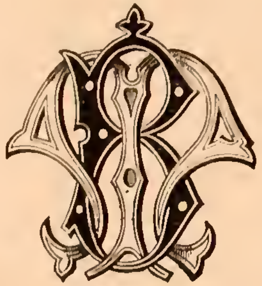


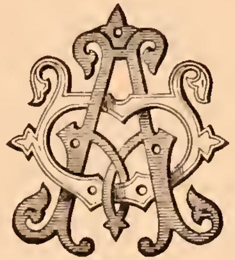


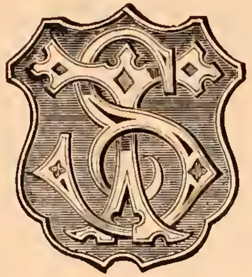


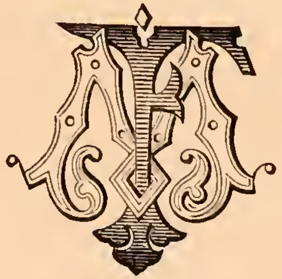


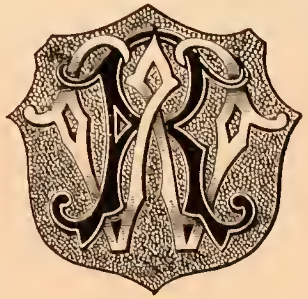
MONOGRAMS.

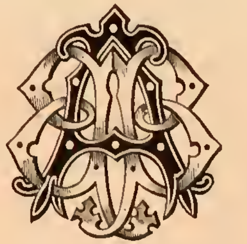


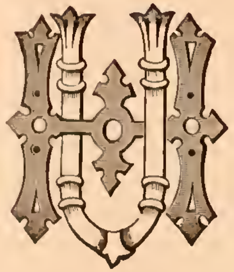


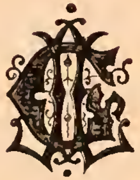


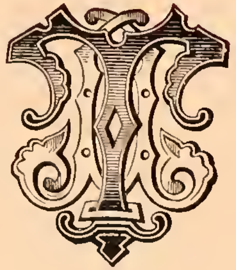


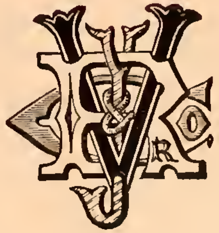


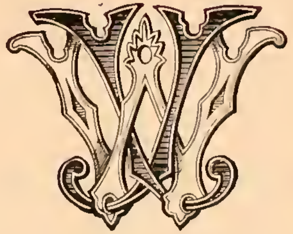


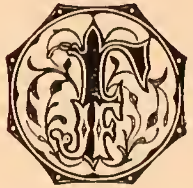


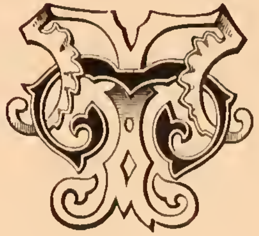


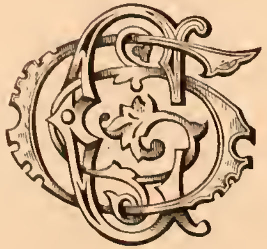


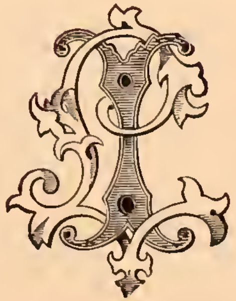


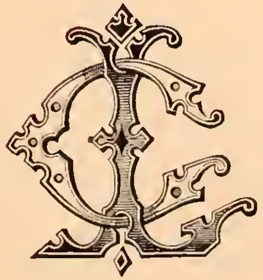


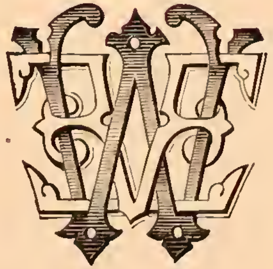


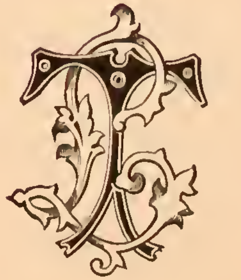












BOSTON ROMAN.

This letter is claimed by the Boston sign painters to be the prettiest letter made. Its most distinct feature is its fine hair-line, but the character of its curved lines is also peculiar. In the New York Roman everything SET or STIFF in the curves of letters is avoided; the New York Roman O is for this reason NOT a perfect circle, as is the case with the Boston Roman, but an easy curve all round. In the Boston Roman the curves are distinct and sharp, some of them resembling the sharp end of an egg, as in P and R, others involve an actual point or break as in S and the tail of R. The grace curves are long and sweeping, and differ entirely from the corresponding lines in the New York letter.

The body of the letter is about square as a general rule, although it may vary slightly in this, as in some other respects, with the taste of the artist or the peculiarities of the space where the letters are to be placed. The thickness of the letter is two-ninths of its height, but some painters make the very small letters a little MORE, and the very large a little LESS than the generally observed thickness. The hair-lines or spurs extend to the right or left from the grace of the letter a distance equal to about three-fourths of the thickness, but these lines vary in length according as it is desirable to spread or condense the letter.

Another peculiarity of the Boston letter is that the lower part is made a little broader or heavier than the upper, thus, the lower large curve of the B projects slightly beyond the upper and is a little thicker; the lower arm of the E extends a little beyond the one above and is also a little heavier; the cross-bar of the B and H is a little above the centre of the letter, thereby giving the lower part a heavier appearance than the upper; the grace lines are also a little longer on the lower part of the letter than on the upper. The effect of these peculiarities is to make the lower part appear heavier than the upper, and to give the letter a decided appearance of standing firmly on its base.

DESCRIPTION IN DETAIL.

The best description of this letter is the letter itself, for its peculiarities are so decidedly Bostonish as almost to defy any written representation. The following remarks on the different letters will perhaps give the reader a distinct idea:—

If the two outside lines of the A be extended straight to the lower line, the distance between the points where they intersect should be a little greater than the height of the letter; the cross-bar is usually midway between the upper and lower lines; the thickness, where it joins the grace lines, is less, and at the top of the letter a little more than the usual two-ninths.

The lower grace of the B is slightly longer than the upper; the cross-bar is above the centre, thereby making the upper large curve considerably sharper than the lower; the thickness of the lower large curve should be greater than the upper; the thickness of both large curves should be a hair-line greater than the upright part, because if made the same thickness it would APPEAR TOO THIN and the letter would look unharmonious and one-sided, and this fact should be borne in mind that the thickness of curves APPEARS less than that of perpendiculars.

The C is a perfect circle on the outside, and should be drawn larger than the other letters the thickness of a hair-line above and below the lines; the inside line cannot be made with dividers, the eye alone must decide as to its correctness; it should be drawn in such a way that its thickest part will be below the centre; the perpendicular lines should be drawn inside of the right hand limit of the circle, so that the lower part will appear broader than the upper—the thickness should be a little greater than the usual two-ninths.

The thickness of the perpendicular part of the D is the usual two-ninths; the thickness of the large curve is a hair-line greater; the lines of the large curve cannot be described by the dividers, but must be drawn entirely by the eye.

The lower arm of the E should extend beyond the upper and be made somewnat heavier; its perpendicular line should be a little longer than the corresponding one above—the centre piece be placed just above the centre.

The arm of the F should be made slightly heavier than the corresponding one in the E; the appearance of the letter may be improved if the centre piece be placed a little lower than in the E.

The outside of the G is a perfect circle, larger than the other letters the thickness of a hair-line above and below the lines; the perpendicular line is placed in the same position as in the C; the left hand inside curve is an oval, making the thickness a little greater than two-ninths; the horizontal line is drawn from the centre of the circle to a point about as far outside of it as the spur usually extends beyond the grace of the other letters; the small curve on the right hand outside of tbe letter is left to the person's taste.

The thickness of the H is the usual two-ninths; the lower grace lines are longer than the upper, and the cross-bar just above the centre.

The J is about the width of the other letters; its thickness is the usual two-ninths. The large curve may be described by a circle EIGHT-NINTHS of the height, and should be drawn the thickness of a hair-line below the line; a sharp and distinct point is usually made where it joins with the perpendicular—the ball is in the form of an oval and not a circle.

Little can be said of the K. The point where the long hair-line intersects the upright thickness should be below the centre: the right hand thickness is less at the grace lines than at the long hair-line.

The upright hair-line of the L is one-half the height of the letter; the arm is made heavier than the corresponding arm of the E.

The M is the width of the other letters; the height of the grace lines on the left hand hair-line is TWO-FIFTHS of the height of the letter; the point of the middle lines should come fully down to the lower line.

The N is usually made narrower than the other letters; the left hand grace lines are THREE-SEVENTHS of the height, and the right hand ones TWO-FIFTHS.

The O is a perfect circle on the outside, drawn a hair-line above and below the top and bottom lines; the inside curve is an oval, and the thickness of the letter a hair-line more than the usual two-ninths.

The cross-bar of the P is above the centre; the right hand large curve has quite a sharp turn, and its thickness is a little more than two-ninths.

The tail of the Q is left to the person's taste, in all other respects the letter is a perfect O.

The R is a P with a tail attached, although the cross-bar is often put still higher; the tail must be studied and copied, as no words can describe it; particular attention is called to the point on its inside curve.

The S is a difficult letter to draw, and one for which it is almost impossible to make a rule. The left hand upright line is even with the left hand extremity of the upper curve; the right hand upright line, however, is considerably to the left of the right hand extremity of the lower curve; the upper curve may be very nearly described by a circle EIGHT-NINTHS of the height; and the lower circle TEN-NINTHS of the height; the upper and lower curves should be drawn a hair-line above and below the upper and lower lines; the thickness or centre part cannot be described. The curves should be smooth and graceful; the point near the centre of the letter should be made distinct, and care taken to avoid that crooked, pot-hook appearance, which results from carelessly drawn curves.

The T should be wider than the other letters; the length of the right and left hand upright lines is ONE-THIRD of the height of the letter.

The grace lines and the long hair-line of the U resemble the corresponding part in the N; the curve should be drawn a hair-line below the lower line, and may be very nearly described by a circle EIGHT-NINTHS of the height.

No particular description can be given of the V and W. The space occupied by the W is greater than that of the other letters. Particular attention to the diagram will give a good idea of the letters.

The X occupies a very little more space than the other letters, and the upper should be drawn slightly narrower than the lower part.

The Y requires more space than the X; the spread of the upper part being considerably more than the height of the letter; the point where the long hair-line touches the perpendicular is four-sevenths of the height.

The Z occupies the ordinary space, the upper arm being shorter than the lower; the left hand perpendicular line is even with the upper left hand point of the letter; but the right hand perpendicular line is considerably to the left of the lower right hand point of the letter.

BOSTON STRAIGHT ROMAN.

In this letter the small curves or grace lines which characterize the full Roman letter are wanting, and many parts of the letter are composed entirely of straight lines, from which it receives the name of STRAIGHT ROMAN. The description of the FULL ROMAN letter will answer very well for the STRAIGHT ROMAN, with the exception that all remarks concerning the grace lines as connected with the thickness are to be omitted, and the letter does not occupy quite as much space.

Boston Roman Lower Case.

The lower case letter differs distinctly from other letters used by painters. It is the LOWER CASE used in printing; and in fact, any of the different styles of this employed by printers may be made use of by sign painters, since there seems to be no distinct standard, every painter introducing some slight alteration of his own.

The peculiarity of the lower case is, that parts of some of the letters extend considerably above or below the main body of the letter; thus, the a, c, e, etc., occupy the ordinary space, but the b, d, f, h, k and l extend above the body of the letter, while g, j, p, q and y extend as far below. These letters will be found to look best when these extensions above and below are equal to one-ha the height of the body of the letter, although they are very often made to vary greatly in this respect, it being sometimes required to compress or spread them to suit some peculiar space. They are always used as small letters, their capitals being the STRAIGHT ROMAN.

There seems to be more variety to this than any of the Boston alphabets, except the Old English (which it in some respects resembles), its appearance to the eye being very pleasing, and where several lines of letters are required on the tablet or other sign, it may be occasionally introduced with the best result. The learner will find it an easy letter to master, and no further direction is necessary than attention to the copy.

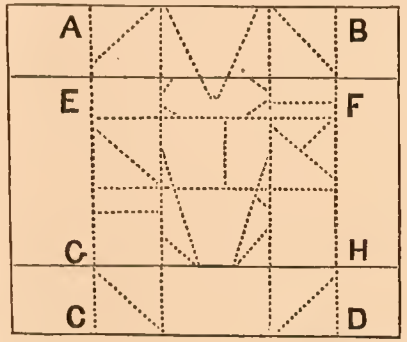
Boston Egyptian Lower Case.

This alphabet is distinct from the Roman lower case by reason of its solid appearance and the equal thickness of all its parts. It is useful to sign painters chiefly because it will accommodate a little larger letter in the same space than the Roman lower case; its proportions are the same, except that it may be made somewhat narrower than the Roman, and its capitals are the round Egyptian.

BOSTON EGYPTIAN OR HALF BLOCK.

The peculiarity of this letter is its solidity, all of its parts being of equal thickness. It is bold and showy, accommodates a larger letter for the same space than any other, and is made very great use of by Boston sign painters. The width of the EGYPTIAN is THREE-FOURTHS of its height, except A, K, M, V, W and &, which require to be a little wider; the thickness is the usual two-ninths of the height, and the letter is so simple in construction that the pupil will find close attention to the copy all that is required to get a good idea of the EGYPTIAN alphabet.

There are two kinds of EGYPTIAN: the OCTAGON and ROUND. The OCTAGON is composed entirely of straight lines, giving the letter an octagonal look, from which it derives its name; the ROUND is composed partly of curves, and is therefore more difficult to manage. The pupil will find the labor of making the round Egyptian lessened considerably by first sketching out the letter lightly in octagon, and drawing the curved lines afterwards, since both the octagon and the round are of the same size and space. The B, C, D, G, J, O, P, Q, R, S, U, and &, are the only letters in the ROUND which vary at all from the OCTAGON; the others are precisely identical.



The accompanying diagram shows the simplicity of the Egyptian letter. The lines A B C D represent the top and bottom lines or height of the letter. The lines E F G H are drawn parallel to these lines, and at a distance from them equal to the thickness of the letter. Then, after drawing the perpendicular lines, making the letter of a proper width, almost all the Egyptian letters can be made in this one space. Thus, in the dotted lines will be found the letters B, C, D, E, F, H, I, J, L, M, O, P, S, U, as well as the numerals 1, 3, 5, 6, 8, 0.

BOSTON FULL BOOCK.

The full block letter is the Egyptian, with the addition of a spur, or short line, extending over the top and bottom of the letter, after the manner of the SPUR in the Roman. It occupies the same space as the Roman, although it is often made to fill more, and may be compressed into very much less space, according to the exigencies of the case. The length of the SPUR is really dependent on the taste of the person making it; the proportion observed in the copy, viz., four-fifths of the thickness, is generally adopted by Boston sign painters. There are two kinds of FULL BLOCK, the octagon and the round; the octagon is more commonly used than the round, and is in fact more in harmony with the general idea of a block letter. The B, C, D, G, J, O, P, Q, R, S, U and &, are the only letters in the round full block which vary from the octagon.

OLD ENGLISH.

The Old English letter needs no special remark. It may be said of it, as of the lower case, that it has no distinct standard of style. The short hair-lines should all be drawn at the same angle, and the fine lines be of uniform thickness. The letter is sometimes made wide and sometimes quite narrow, and the thickness may be made very heavy or very light, according to the taste of the person making it; in fact, such great liberties are taken with this alphabet, that the judgment must, in a great measure, be depended upon. The proportion of the capitals to small letters is the same as in the LOWER CASE, and the spacing is about the same.

PUNCTUATION MARKS.

The punctuation marks — comma, period, &c., need mention only to observe that those belonging to hair-line or Roman letters are round, while those used with EGYPTIAN or BLOCK letters are square, and they are always of the same thickness as the letter they follow. The position of the apostrophe is always on a line with the top of the leading letters. The period belongs close to the letter it follows, and not half way between it and the next letter, as it is sometimes erroneously placed.

NEW YORK ROMAN.

SEE PAGE 14.

New York painters will not admit any style of letter to be superior or even equal to that in vogue in the greatest American city; they consider the Boston style " homely, weak, skinny and effeminate." It must be admitted that the New York style is the bolder of the two, and therefore a little more easily read; in fact, its peculiarities make it entirely different from the Boston letter, so distinct that a person accustomed to it could not fail to regard the Boston style as unsatisfactory; and undoubtedly one great reason why the New York painter cannot endure the Boston letter, and VICE VERSA, is the decided difference in the style of the other, from the one to which he has all his life been used to see.

The outline of the New York Roman is bold, the small line or hair-line is thick or stout, and the body of the letter solid and strong; the curves are easy rather than exact — in fact everything STIFF or SET is avoided as much as possible. The C, G, O, and Q are not made a perfect circle, but an easy, graceful curve; the small curves are short and sharp, and assist in giving the letter its bold look; the SPUR, or short line, extends over the letter about three-fourths of the thickness; the width of the letter is generally more than its height, and the short line, or hair-line, is made one-fifth or one-sixth of the thickness.

The best way to study this, or, in fact, any letter, is by comparing its different parts with its height, thus: We use the dividers and find the thickness to be about one-fourth of the height, the width of some of the letters to be more and some less than the height, etc., etc., and in this way, together with careful practice, the learner may gain a better idea of the letter than any written description could possibly convey.

The Roman A is broader at the bottom than the height of the letter; the cross-bar is TWO-FIFTHS of the height; it comes to a point at the top, which point should never be less than the thickness of the hair-line, and this top is sometimes cut off parallel with the upper line, and sometimes at a slight angle with it.

The width of the B is the same as its height; but it is frequently made broader. The cross-bar is put in the centre; the right hand curves extend the same distance from the upright part of the letter, but the lower curve is sometimes made to pass a very little beyond the upper.

The width of the C is greater than its height, and its thickness should be more than that of the B. It is not a perfect circle, but an easy, graceful curve, not to be described by the dividers. The extremity of the lower hair-line should be made heavier than its other parts.

The D should be made wider than its height, its principal difficulty being the sweep of its large curves, for which the eye alone must be depended upon.

The E may be made wider than its height, with its cross-bar just at the centre, or a little above; which may also be said of the F, except that some painters consider its appearance improved if made narrower than the E.

The G, like the C, is not a perfect circle, but an easy curve, its thickness and width being the same as the C. The lower right hand part may be made less than the usual thickness; the horizontal line should be placed below the centre.

The width of the H is equal to its height, and the cross-bar at the centre, or a little above.

The I requires no particular remark. The J will bear being made narrower than the other letters, and its ball should be placed considerably below the centre.

The K occupies the same space as the H; the point where the right hand arm, or hair-line, intersects with the perpendicular part of the letter, varies with the taste of the artist; but THREE-SEVENTHS of the height will answer for a general rule.

The L and M are the width of the other letters, while the N may be made narrower.

The O and Q are not perfect circles, but the same graceful curves as the C and G; their width is greater than their height, and they look well with more thickness than the other letters.

The P is as wide as the other letters, and its cross-bar is placed sometimes at the centre, and sometimes below, but never above.

The R is the width of the other letters, its cross-bar being placed usually at the centre. The curves of this letter are peculiar, the tail being particularly difficult to master. It cannot easily be described, which may also be said of the curves of the S; in fact, the eye alone is to be depended upon in both these letters.

The T is as wide as high, but is sometimes made wider, and its arms extend downward from the top line a little less than the thickness of the letter.

The U requires no particular remark, and the V may be described as an inverted A without the cross-bar.

The W is composed of two compressed Vs, and requires considerably more space than the other letters.

The X occupies the usual space; the point where the hair-line intersects the middle part of the thickness should be above the centre.

The Y fills more space than the ordinary letters; the point where the right and left angular lines intersect with the upright line should be above the centre.

The Z requires no particular remark, except that the right hand upper point and the left hand lower point should never be sharper than the thickness of the hair-line.

NEW YORK EGYPTIAN, OR HALF BLOCK.

This letter is distinguished by the equal thickness of all its parts, and the entire absence of hair-lines. It is made great use of by sign painters, since it admits of being made very much higher than any other letter in the same space. Its thickness is usually ONE-FIFTH of the height, and its width THREE-QUARTERS of the height. It is so simple in construction that the learner, with a little use of the dividers and careful study, will not find great difficulty in understanding it. There are two alphabets of the New York Egyptian — the octagon and the round. The octagon is, however, but seldom used.

NEW YORK FULL BLOCK.

The Full Block is the same as the Egyptian, with the addition of a slight extension or spur to the right and left of the letter; the length of which is sometimes ONE-THIRD, and sometimes ONE-HALF, the thickness of the letter; the width is the same as the height, but sometimes much wider; as in extended letters, its thickness is generally one-fifth of the height. It occupies the same space as the Roman, and, with a little study, the reader will find it an easy alphabet to comprehend.

New York Roman Lower Case.

This letter differs from the other New York alphabets, — its peculiarity being that parts of some of the letter extend above, and others below the main body of the letter. The length of these extensions above and below the lines differ at times, being made to suit some particular requirement; they are ONE-HALF or TWO-THIRDS of the main body of the letter. What is meant by the main body of the letter is the height of the a, c, m, n, &c., and the thickness of the letter is sometimes ONE-QUARTER and sometimes TWO-SEVENTHS of this height, accordingly as the letter is compressed or spread. The letters all occupy the space of the a, c, e, &c. except f, i, j, l, r, t, which, being ONE-HALF the ordinary width, of course require less space. After some acquaintance with the New York Roman, the pupil will have but little trouble with the LOWER CASE.

New York Egyptian Lower Case.

This alphabet bears the same relation to the New York Roman lower case that the capital Egyptians do to the Romans. A careful study of the copy, and a little use of the dividers, will make the pupil familiar with it in a short time.

SPACING.

If the pupil mark out carefully the word SLAY, in Roman letters, he will perceive more space between the L and A than between the other letters. In order to correct this appearance, the S must be moved a little from the L, and the Y from the A, which will be found to give the word an even, regular look. Precisely the same attention is to be paid to the distances between words, thus: If it were required to place on a sign the following, — Importers and Jobbers of Hair, — it would be obviously in bad taste to put it thus: —

Importers andJobbers ofHair, or,
Importersand Jobbersof Hair, or,
ImportersandJobbersofHair.

Good taste requires that the words should be equally distant from each other, and this is what is meant by spacing. The importance of careful spacing cannot be overstated; it is the sign painter's saving grace. A well spaced sign, even if it be poorly lettered, will make a good appearance, and be accepted, nine times out of ten; while precisely the reverse is true of a sign well lettered but poorly spaced; the time and labor spent in careful spacing will be found to be well repaid. In every style of letter, — exeept the Lower Case, which will be mentioned hereafter, — an equal space is allowed for all letters except I and W; the W being quite a wide letter, it is customary to allow a lttle more space for it than for ordinary letters; while for the I only ONE-HALF the usual space is allowed. One-half a space is also left between capital letters of names; thus, if we were spacing out the name J. H. Smith, we should leave one-half a space after the J, and one-half a space after the H, but none after the S, because the letters mith do not require to be separated from it. The effect of allowing these spaces is to give prominence to the capitals and distinctness to the whole name.

The folowing examples will show the difference between the good and bad spacing of capitals:

1 J. H. Smith. J.H.Smith.

A half space is also allowed between words, thus: In the case of painting the line " Importers and Jobbers of Hair," a half space should be left after each word, and at least a half space at each end of the sign; as a general rule it looks better to see a little more space at each end than between the words. It should be remarked here that it is not intended to convey the idea that one-half space and ONLY one-half space is just what is demanded in all cases; on the contrary, the size and form of the sign or place to be lettered, as well as the words to be put on, may be such as to require more than a half space, or more even than a whole space, between the words. Necessity often compels the spacing to differ somewhat from the rules here laid down, but that work will be found to look best which conforms most nearly to these instructions.

Where several lines of letters are required on one sign, such as upright or tablet signs, or, as very often happens, on tin signs, care must be taken to have an EQUAL SPACE between each line, thus: In this example, the space between MUSTARD and the top of the sign, and EXPORTATION and the bottom of the sign, and between the lines of letters, should be the same.

We will now suppose it is required to mark out a sign with the name of J. H. SMITH & Co. If we make dots to represent the spaces, leaving one space for each letter except the I, for which a half space is allowed, and a half space between initials, and an equal space at each end, the following will represent its appearance:

. 1 . . 2 . . 3 . 4 . 5 . 6 . 7 . . 8 . . 9 . 10 .

MUSTARD,

Pickles, Ketchups,

PRESERVES,

Neatly Packed

FOR

EXPORTATION.

The first space is for J, the second for H, the third for S, etc. It makes no difference what kind of letter is required, whether it be Roman, Straight Roman, Egyptian, or Block. All the letters of the name must go in their corresponding spaces, the only difficulty being as to the size of the letters. The following is the rule for the SIZE of the different styles of letters: The height of the Full Roman is TWO THIRDS of the SPACE, but if it be desired to make the letter as large as possible, it can be made to go THREE FOURTHS; that is, if the SPACE be found to be twelve inches, the full Roman will go EIGHT inches high, or NINE inches, if it be required to make a large letter. In the same twelve-inch space the Straight Roman will go TEN and ONE HALF inches, although it looks well when made as small as three fourths of the space; but it is usually made SEVEN EIGHTHS. The Full Block will go about the same as the Full Roman, although it is often compressed and made to go as high as the space itself; that is, TWELVE inches high in a twelve-inch space. The height of the Egyptian is greater than the space, being generally made one sixth greater; that is, in a TWELVE-inch space, the Egyptian looks best FOURTEEN inches high; but it can be made, if desired, EIGHTEEN, TWENTY, or even TWENTY-TWO inches high, or one half, TWO THIRDS, or FIVE SIXTHS higher than the space. It is on this account a very popular letter, and very frequently made use of by sign-painters. The sizes mentioned above refer to the ordinary letters; that is, in the name of J. H. Smith, the above rule gives the size of the letters "mith," and not the J. H. S., which are usually made higher than the other letters of the name, and are called LEADING LETTERS, or CAPITALS.

The leading letters are made sometimes ONE FIFTH and sometimes ONE FOURTH higher than the ordinary letters. When the ordinary letters are eighteen inches high, or more, the leading letters need not be more than ONE FIFTH higher; but when they are small, the leading letters will be found to look better ONE FOURTH higher.

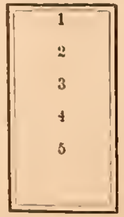
These remarks on leading letters do not apply to lower-case letters, which have some peculiarities of their own, and are distinctly different from the other alphabets. Some of the lower-case letters extend above the line of the ordinary letters, thus: The b, d, f, h, k, etc., extend above the a, c, e, etc. Now the effect of limiting the extent of the b, d, f, h, etc., to ONE FIFTH, or ONE FOURTH above the ordinary letters, would be to give the letter a stunted, crowded, and very ungainly appearance; if the leading letters, and b, d, f, h, etc., be made about one half higher than the ordinary letters, the effect will be about right. The thickness of the lower-case is the regular TWO NINTHS of the ORDINARY LETTER; that is, a, c, e, etc., and the b, d, f, h, and other letters which extend above and below the line, are also of this same thickness; the capitals or leading letters, however, are two ninths of their own height. In spacing lower-case, THE space is allowed for a, b, c, d, e, g, h, k, n, o, p, q, s, u, v, x, y, and z; ONE HALF space for i, l, t, a little more than a HALF space for f, j, r, and a little more than a WHOLE space for m, w, and all capitals.

A great advantage of the lower-case is, that by its use in proximity with a line of large, heavy letters, the latter are made, by contrast, to appear very much more bold and distinct than would result from the use of another style in place of the lower-case. Thus, if it were required to put on a sign the following: Brown & Black, Wholesale Dealers in Fish, and important that the word *Fish* should be made as distinct as possible, by putting Brown & Black in Roman letter, wholesale dealers in lower-case, and fish in large Egyptian, the word fish would look more prominent than any other line on the sign, and would be the first to catch the eye.

There are two lower-case alphabets — the Roman and the Egyptian. The Roman is the prettier of the two, and more often made use of; it is only necessary to remark of the Egyptian, that it has no *spurs* or short hair-lines, and can therefore be made a *little larger* in the *same space* than the Roman. The Old English is very similar to the lower-case, may be made about the same use of, and its rules in regard to spacing are the same; while its fine hair-lines and the regular angle of the short lines give it a slight advantage in neatness over the Lower-Case.

In spacing out a sign with several lines of letters, there is sometimes a difficulty in making the spaces between the lines equal without considerable rubbing out and marking over, and an expenditure of much time and more patience. The following example will show the quickest and surest way of meeting this difficulty.

Suppose the sign to be painted is two feet wide and six feet high, and five lines of letters are to be put on. First, decide which lines are to be Roman letter, which Egyptian, which Block, etc.; then find the size of the first line of letters (see page 40), and mark it at the top of the sign; next find the size of the second line, and mark it immediately under the first, and so on through all the five lines. The sign will then resemble the following diagram:



The space from the bottom of the fifth line to the bottom of the sign is to be divided into equal spaces, to go between the lines. On a sign with one line of letters there is, of course, one space above and one below the line; where there are two lines, there is a space above and below, and one between the lines: that is, there is always one more space than lines of letters. In the example under consideration there are five lines, and therefore six spaces, so that by dividing the space below the fifth line in the diagram in six equal spaces, the exact distance between each line will be found, and the sign can then be marked out without trouble or loss of time. A single remark more is all that is necessary to complete the hints on the spacing of lines of letters, and that is, in regard to short lines, such as and, of, for, etc. If such short lines were spaced exactly according to the above instructions, the spaces they occupied would appear to be much larger than the ordinary spaces between the lines: it is therefore necessary to make the spaces above and below all short words a little less than the ordinary space; and the quickest way is to allow two spaces between the lines where such a word comes, and put the word in the middle of this double space. Thus: suppose the sign to be like the following diagram:

IMPORTERS,

JOBBERS,

—AND—

COMMISSION

Merchants.

Space out the sign as though there were four lines, and the *and* were out of the account entirely, *except*, that instead of allowing five spaces, *six* must be allowed, and two spaces placed under the line *Jobbers*: in the middle of this double space the *and* is to be put; a short dash on each side will generally prove an addition, and the spaces will then appear about even between all of the lines.

The above instructions on spacing apply to all kinds of signs, tablets, tins, door-posts, &c., but there are sometimes signs to be painted in places where it is impossible to space in the ordinary way, — such as lettering upon buildings, brick walls, and other high places impossible to get at except upon ladders or swing-stages. There are several ways of obtaining the exact space, size of letters, so that a painter can commence with his work and go right along without spacing, according to the method above described. The most common method is to find the length of the whole space to be lettered; then, knowing the number of letters, the number of spaces between the words, and the space to be left at the commencement and end of the lettering, it becomes a very easy matter to figure out the exact size of the lettering, spaces, &c. For instance: suppose the building which is to be lettered to be twenty-five feet long, and the words to be painted, "Cracker Bakery," in which there are thirteen letters; if it were thought best to make the spaces one foot each, allowing one space for each letter, and one half-space between the words, of course thirteen and one half feet would be occupied, leaving the difference between that and twenty-five feet to be divided equally for the ends; so that, if the lettering were commenced five feet and nine inches from the end, one foot allowed for each letter, and six inches between the words, the work would be found to be correctly spaced. After finding the space and deciding which style of letter is to be used, — Roman, Egyptian, Block, &c., — the only thing to be done is to mark out the height of the letter — the rule for finding which has been given on page 40. If it be desirable to make the space eighteen inches, instead of one foot, the lettering would commence two feet four and one fourth inches from the end; if the space were to be fifteen inches, the work would begin four feet and one inch from the end. In fact, careful figuring and careful measurement are all that is required to space correctly by this method.

A better way than the above is to sketch out carefully on a piece of paper the line of letters to be put on, then divide the length of the paper into as many equal parts as there are feet in length on the place to be lettered. For instance: suppose the paper to be six inches long, the lettering is to be marked out carefully, in good proportion, with a suitable space at each end, so that it will not appear crowded, after which, if the building on which the lettering is to be put be twenty-five feet long, the paper is to be carefully divided into twenty-five equal parts; then, by marking off on the building spaces of one foot each, it becomes a simple matter to place the letters in the positions corresponding to those on the paper. The best way, however, is to mark out the work by an exact scale of so much to the foot; a half inch to the foot will be found as convenient as any. After selecting a suitable sized paper, or a piece of smooth board, which is much better, since it can be handled on a staging without difficulty, and will not blow away or get rumpled or torn, — a space is to be marked out twelve and one half inches, if the building be twenty-five feet, or, in other words, twenty-five half inches; the lettering is then to be marked out exactly as it is desired to look on the building, after which no difficulty will be found in proceeding with the work, as every half-inch in the plan is equivalent to one foot on the building; one fourth of an inch is equivalent to six inches on the building, one eighth is equivalent to three inches; so that by this method it is impossible to go wrong if the measurement be correct in the first place. A great advantage of this method is, that it enables the artist to show to the person having the work done, an exact copy of the sign as it is to be, the size of the letters, and the arrangement, so that any alterations can be easily made if desired, and satisfaction thus guaranteed in advance.

In making letters on a circle they should be straight across the top and bottom, and the same width should be observed at the bottom as at the top, as a rule. In case there is little space between the letters, their bases can be slightly contracted and the tops and bottoms on a line with the curves, as in fig. 1. Numbers 2 and 3 are, however, the correct methods.

BOARD SIGNS.

The amount of pitch in the best lumber used for signs is such that the beauty and durability of the painting is very often marred; in fact, frequently completely ruined; a very ordinary heat being sufficient to start the pitch to running out over the surface of the sign. Shellac varnish being the only known article which will dry hard over it, and

prevent its boiling or stewing through the paint, its use is unavoidable, notwithstanding the belief that the work is less liable to wear well when it is used. The general practice is to put on the shellac first, but there has been some doubt in the minds of painters whether it should be applied immediately to the bare board, or a coat of priming color first applied, and the shellac spread on after the priming has become dry. There is this reason in favor of putting on the priming color first, that it can strike into and dry into the pores of the wood, thereby rendering the durability of the painting more probable; but there is this decided reason in favor of applying the shellac first, that, when it is put over the priming coat all subsequent coats of paint are very liable to peel off, there being so little affinity between the paint and shellac; it is therefore safer to apply the shellac first, and the priming-coat may be put over it as soon as it becomes hard. When this has become dry, the sign should be thoroughly puttied wherever required, and carefully sand-papered, after which the second coating can be put on; when this is dry, the sign is ready to be marked out. After carefully marking out the lettering, if it is to be a white letter, all superfluous pencil-marks are to be cleaned off the surface of the letter with a clean cloth and a little spirits of turpentine, when the finishing-coat should be spread on carefully and neatly, and when dry the pencil-marks will be found to show through sufficiently to work by. If the letter is to be black, the color used should be mixed with boiled oil and a little japan: by adding to it a little fat-oil or varnish, the drying property will not be interfered with, and the color will be more certain to dry with a good gloss; should it *crawl* or *fret*, the difficulty can be remedied by rubbing over the surface of the sign with soap and water, or a little spirits of turpentine. If the letter, instead of being black, is white, the work is to be cut in; that is, the black, or whatever color is to constitute the ground-work, is to be painted round the letter, and all parts of the face of the sign, except the letter itself, to be covered with this ground-work color. If the ground-work is to be sanded, after being certain that every spot is properly covered, the entire surface of the sign may be scattered over with the sand as evenly as possible, through a sieve; and when all is covered, the superfluous sand may be turned off on a cloth or paper. This finishes the sign, except blacking out the mouldings, unless the letters are to be shaded, which is done when the ground-work color becomes dry. Sometimes the shading is done before the sign is cut in, as in the case of white letter with gold thickness; where, after the sign is prepared as above directed, the shade or thickness is *sized* and *gilded*, and afterwards toned or graded down with siennas; when sufficiently dry the letter and thickness are both cut in and the sign sanded. The letter may be afterward shaded with any color over the sand.

SHADED LETTERS.

A letter is shaded with the addition of another color, generally to its right side, and under parts at an angle usually about forty-five degrees to the letter itself. This shade may be made at any angle, may be put on the right side or the left, at the bottom or the top; but the usual custom is like the illustration, page 29. Properly this addition is not a shade, but a thickness; because when treated in this manner, it resembles a letter cut out of a block of wood, this shade showing the thickness of the block. There is still another shade which may be added to the letter — a shade, in fact, of the letter and thickness of the block. There is, besides, a back or second shade (see illustration, B and D, page 12). If a letter cut out of a block of wood were laid on a table near a strong light, the shadow cast on the table would be this back or second shade; the thickness of wood would be the first, or thickness, and the top surface would be the original letter. If the pupil keep this in mind, he will be immensely more successful than if he goes on with the shading without knowing what he is trying to represent. The first shade or thickness is sometimes made to join the letter, and sometimes is placed a little distance from it, leaving a narrow line between it and the letter; the first is called a close shade, the other a free shade. (See illustration, page 11. G and L are close shades; H, J, K, free shades.) As a general rule, the close shade will answer in all cases; but the taste of the painter will discover some occasions where the free shade is preferable. The shade may be made of every conceivable color, but should always be in harmony with the letter; and since it is the letter which is to be read, and not the shade, the two should be managed in such a way as to make the letter prominent and distinct, and the shade sombre.

ORNAMENTAL LETTERS.

The Ornamental letter may be made entirely according to the fancy of the painter, although the most successful ornamental alphabets are those where the original form of the letter is most perfectly retained. The best method to follow is to draw the letter distinctly in the first place, work the ornaments on to it, taking care to alter the form as little as possible. Points, pearls, eccentric lines, leaves, and vines may be added, according to the character of the design or the taste of the painter; or the letter may be made to consist of one complete scroll; or some of the ornaments may be of one color and some of another, while the letter itself may be made of still a different color, and so on, with as infinitely different forms and colors as the imagination may suggest; in fact, any person with a taste in this direction will find the study of ornamental letters a most beautiful pastime.

MEDIEVAL.

The Medieval alphabet is seldom made use of. It might, perhaps, be employed for an old established bookstore, antiquarian society, library, &c.; but it is principally used for monograms and on church walls and tablets.

ANTIQUE OR OLD STYLE.

This style of letter has come to be quite popular of late years, being a plain and distinct alphabet, easily read — having some of the characteristics of both the New York and Boston Roman, and yet being so decidedly different from either as to make its occasional use quite acceptable. It seems to be the one style which looks well anywhere, appearing to good advantage over a merchant's door or on a church tablet, and has the additional advantage, notwithstanding its odd look, to be quite easily understood. It has not the bold look of the block-letter; and it would not be advisable to make use of it where a large and heavy style seems best suited — such as on high brick walls, &c.; but may be introduced wherever a neat and pretty letter would be appropriate.

SCRIPT LETTER.

The Script letter is never employed for boldness, nor in any case where it is desirable that the sign should be quickly read. It cannot be called plain and distinct in the same sense that other alphabets can; but the Script is unquestionably the most beautiful of them all. The capital letters are composed, in very many cases, of what is known as "Hogarth's line of beauty," a line involving two slightly opposite curves; and the beauty of the letter may be said to depend almost entirely upon the grace of this line. Great care should be taken to make all the letters slope at the same angle, which should be forty-eight degrees. The curves should all maintain the same oval character, and the slope of this oval should be the same as the slope of the letter. The pupil will find this alphabet to require close study, and much difficulty will be found in mastering it. But whoever can paint a beautiful Script sign will not be long in making a reputation as a sign-painter.

DESIGNS.

On pages 33 and 34 will be found several designs intended to convey an idea of the form and arrangement of fancy signs. In signs of this kind it is best to avoid straight lines as much as possible, especially of those words required to be made prominent. Easy, graceful curves and sweeping lines are most desirable, particularly when a good variety can be introduced.

COLORS FOR SIGNS.

The cheap kind of board sign is a white ground-work and black letter. This style is the plainest and cheapest looking, and is sometimes thought to be the strongest contrast to be made with paint; but it will be found, by comparison, that a sign with black sand ground and white letter is a stronger contrast, and makes a much neater sign. It is, perhaps, a little more costly style than the white ground, because more time is required to *cut in* a letter than to paint it on; and there is also the expense of the black sand. But the sign looks more than enough better to balance the difference in cost, for which reason this style has become the most popular of the cheap signs, and is almost sure to give satisfaction.

A blue sand-ground and white letter with black shade is a neat and quite a showy style, a little more costly than black and white, not only on account of the shaded letter but of the blue sand, which is a little more expensive than the black. The blue sand, or *smalts*, holds its colors longer than the other fancy sands, and is generally considered to have a more lively look. The blue, green, brown, purple, and other fancy-colored sands will be found to give the sign an unfinished look, unless the letter be shaded. The quickest and cheapest shade on a sand ground-work is black, and this color is most commonly employed. These fancy-colored sand-grounds are sometimes very much improved by putting a white stripe, an inch or two from the moulding, around the face of the sign, and filling the margin with light vermilion, or any bright color, either of paint or sand, which affords a good contrast. Sometimes the ground-work is ornamented with black and other colors, and made to resemble showy pattern of cloth; and, although this style is not employed of late, it shows to good advantage on signs for dealers in cloth.

A gold letter and black shade on any of the fancy-colored sands makes a very neat and tasty sign; the effect of the gold against the colored sand is agreeable, and such a sign, while being very modest, is decidedly attractive.

A very showy sign is a white letter with a gold thickness, the under parts being graded down with siennas, and a black or Prussian blue-black shade on a blue sand-ground, with a white line around the sign, and the margin filled with vermilion. This is one of the most bold and showy styles in use, and is very popular. But the painter need not confine himself to blue, as nearly all the other fancy sands may be treated in a similar manner, and with very nearly as brilliant an effect.

But when it comes to paint ground-works, an unlimited field is opened; for there is no imaginable color which cannot be imitated and made use of; in fact, a prettier study cannot be devised than to make up a number of beautiful ground-works, and ornament them with brilliantly-colored shaded letters. The reader may get some hints from the following styles:

On Chocolate ground — light-blue letter, white light, vermilion thickness graded down with carmine, black back-shade.

Gold letters — straw-colored light, Paris green thickness graded down with dark-green, black back-shade.

Light French gray letter with white light and any of the above styles of shading, and light pea-green letter and light purple letter, may be shaded the same way.

Purple grounds may be treated in a similar manner; but of course no purple can be used on the letter or shade; and so, by avoiding the ground-work color in the letter and shade, the whole range of ground-work colors can be gone through with. Paris green, ultra-marine blue, all the reds, drabs, browns — in fact, all the colors which the imagination can conceive.

Black ground-works also may be made use of, and on them may be put the letter of gold, white, yellow, and the light tints of all colors; and in the shading, any of the brilliant colors may be employed, which do not too much resemble the letter.

A white letter, with vermilion thickness graded down with carmine, gives a brilliant effect. A Paris green letter and white light, with vermilion thickness graded down with carmine, makes a gay appearance. A gold letter with Paris green thickness, graded down with dark green, looks very well; so also does a very light pea-green or purple letter, with light blue thickness, graded down with ultra-marine.

White ground-works are not often employed with fancy shade; when they are, dark colors generally, sometimes vermilion, occasionally gold, but usually black, are the colors used for the letters, while the shades are mostly grays and drabs.

Black letters, with vermilion thickness graded down with carmine, and gray back-shade, makes a good appearance.

Vermilion letter with gray thickness looks pretty, and so also a letter of Paris green or ultra-marine blue. But the light ground-works are more commonly made of the lightest tints of various colors in preference to white, and on these almost every possible variety of color can be introduced; and excellent effects are often obtained.

These light ground-works admit of experiment without end: all the colors of the rainbow may be used for the letter or shade; but the experimenter will find his best successes in keeping the brilliant and strong colors in the letter, and the soft and delicate tints in the shade.

GRADED GROUND-WORKS.

Graded ground-works are made by using the lightest tint of a color for one part of a sign, and grading it down to its darkest for the other part; or, for instance, to make it more clear: if we have a tablet sign on which we wish to put a graded ground-work of red, we commence at the top with orange-red, and work down, carefully blending the colors as we go into light English vermilion, Chinese ditto, India red, which will, perhaps, bring us to the bottom of the sign, or chocolate color, if we wish to make it still darker, giving the sign the appearance of being one part in the light and the other in the shadow, with no break between the light and dark shades. Either the top or bottom of the sign may be the lighter; or the lightest tint is sometimes in the centre, and the darker tint worked round it, according to the fancy of the painter.

The success of graded grounds has not been marked enough to make them popular, and they are seldom used.

GOLD GROUND-WORKS.

An expensive venture has been made in gold ground-works. They look costly and pretty, but are not showy enough to balance their extra cost.

The letter on gold ground-works is usually black and sanded, and frequently shaded up with brilliant color; and the ground-works themselves are often ornamented by painting and sanding some pretty design on the face of the sign before the gold is put on. Two coats of paint are put over this design after it has become dry, and the whole surface of the sign is then carefully sized and gilded; this leaves the ornaments rough and the other parts of the surface smooth, giving the effect of a gold ornament on a gold surface. By lettering the sign at the same time of putting on the ornaments, the form of the letter can be seen under the gold sufficiently to work by, without making a mark on the gold, or the letter may be cut in and not gilded. The style of the ornaments can be varied to suit any taste, as also can the style of the lettering and shading.

GILDING.

The *sizing*, when applied, should not be so fat as to prevent its working easily, should be free from *skins* or *motes*, and be put on evenly, and will work best if allowed to dry in a moderately warm room. Before proceeding with the gilding, the *sizing* should be carefully examined, as its condition makes or mars the beauty of the work. Experience will best enable a person to decide when the *size* is in the best condition for the gold; but as a rule it should be dry enough to bear considerable pressure of the knuckle (which must be clean) without leaving any mark, while at the same time being slightly *tacky*. When the *size* is in just the right condition, the gilding has a beautiful lustre; but when too *tacky* it has no lustre at all, and, if exposed to the air for any length of time, will be very liable to turn a rusty color.

When the work is ready for the gold, the leaf should be handled in such a way as to place it on with as few wrinkles as possible, covering the large places first, and afterwards the smaller places and whatever breaks occur. After the *sizing* is entirely covered, it should be patted down and carefully rubbed smooth with a bit of cotton, or a badger-hair brush. The superfluous gold may be collected with an old stocking-leg, slightly moistened with oil, and lightly passed round wherever the loose gold lies.

There are many different styles of gilding, but the above is the only one having any relation to lettering, except *burnish gilding* on glass, which will be spoken of in another place.

PREPARING WORK ON SMOOTH SURFACES.

On japanned tins and irons, and other smoothly finished surfaces, where it is impossible or unadvisable to make a mark by the ordinary means, the marking out may be transferred from paper.

The surface is first carefully cleaned by being wiped with a chamois-skin; a little powdered rotten-stone is then scattered over it, and carefully dusted off with a soft duster; this is to prevent the gold from adhering to the surface, which it is sometimes liable to do. A piece of blank paper is then placed over the surface, and the work marked out on it with chalk or lead-pencil, after which it is taken off and its reverse side rubbed over with chalk and afterwards well dusted off, when the paper is again placed over the surface, and the pencil-marks traced over with a metallic point. On removing the paper, the marks will be found to be transferred to the surface, with a chalk-mark as fine as the metallic point used. This process can be used on any work where a clean, fine line is important.

BURNISH GILDING ON GLASS.

The following is the method pursued with the brilliant burnish gilding and fancy shading on glass seen in all the large cities.

The work is first carefully marked out on a paper, and these marks are all pricked through with a pin or needle, and the roughness of the holes carefully sand-papered down.

This pattern is laid on the outside of the glass in the desired position, and a *pounce* (Note. — A pounce is a soft cloth

bag, containing any colored powder, a little of which escapes through the bag on being rubbed over a pattern or any other surface,) rubbed over it, when the pattern will be found to be transferred to the glass. The remainder of the work is all done on the back side of the glass.

First, the glass is to be thoroughly cleaned where the lettering is to go, then the *sizing* (a rule for making this sizing will be found on p. 46) may be applied freely with a soft brush, and the gold laid *immediately on the wet size*, covering generously all the letters to be gilded. When the size is dry and all the moisture evaporated, the gold may be rubbed down with soft cotton, and a second coat of gold applied. In applying the *sizing* a second time, the operator must pass the brush lightly over the gold, as it is liable to *start up* if rubbed too hard.

After the letters are all solidly covered, the pattern is put over it the *reverse way* and pounced, thus leaving a distinct line to work by; the letters are then painted or *backed* over with asphaltum varnish, which will soon dry, when all the useless gold can be cleaned off with cotton, wet with a little water or spittle. The solid part of the letter being now finished, a straw-colored line may be put on the upper and left-hand sides for a *light*,* and a black line, about half an inch wide, drawn as far outside the letter on the right hand and lower sides as it is desired the fancy-colored thickness or shade should be made, and outside of this black line and adjoining it, may be put still another of raw sienna or burnt umber. When these become dry, the space between the black line and the letter may be filled with whatever color may suit the taste, and carefully graded, the darkest tints being on the under parts of the letter, and the lightest at the sides. By referring to the Egyptian S, on page 29, the pupil may understand the matter better than by the written description. The plain part of the letter, that is, the letter itself, is what is to be gold; the darkest mark outside the shade represents the black line, and the fainter line outside that the raw sienna or umber line. Between the black line, the letter is the fancy-graded shade, which may be red, green, blue, or any color to suit the taste.

Sometimes, instead of making the letter completely solid, only an outline of the letter is made, and the parts of the letter left vacant filled with any brilliant color contrasting well with the shade. By this means quite an array of magnificent colors may be brought together in one job. After all the colors are dry, they should be *backed* over, each part of the shade with about the same color as before, and the whole varnished over, the varnish lapping slightly over the letter on the glass, to prevent moisture from getting under the work, and the job is finished.

Two kinds of gilding are sometimes introduced on this work; thus, instead of filling the outline letter spoken of with paint, the open parts are to be sized with any quick-drying and transparent sizing, — clear japan, for instance, — and, after coming to a proper tack, carefully gilded. The effect will be a brilliant outline and dull centre parts, but all of gold, similar to what the gilders call *matt*.

POSSESSIVE CASE.

A short paragraph on punctuation would be of service to all sign-painters, since their ideas on this subject are original, and not according to any fixed rules; but as no particular difficulty is met with except in the use of the possessive case, it will perhaps be as well to confine these remarks to that topic.

The most common form of the possessive is the addition of an apostrophe and *s* to the word: as, Wright's Pills; and if this rule were always followed, it would convey with sufficient distinctness the idea of the possessive. But grammarians have established certain exceptions which public opinion has indorsed and adopted, and these exceptions, therefore, must be respected. The following observations on the possessive, by Peter Bullions, will be found to meet most of the difficulties:

1. — When several nouns come together in the possessive case, implying common possession, the sign of the possessive ('s) is annexed to the last, and understood to the rest; as, "Jane and Lucy's books," *i. e.*, books, the common property of Jane and Lucy. But if common possession is not implied, or if several words intervene, the sign of the possessive should be annexed to each; as, "Jane's and Lucy's books," *i. e.*, books, some of which are Jane's and others Lucy's. "This gained the king's, as well as the people's, approbation."

2. — When a name is complex, consisting of more terms than one, the sign of the possessive is annexed to the last only; as, "Julius Cæsar's Commentaries," "John the Baptist's head," "His brother Philip's wife," "The Bishop of London's charge."

3. — When a short explanatory term is joined to a name, the sign of the possessive may be annexed to either; as, "I called at Smith's the bookseller," or, "at Smith the bookseller's." But if, to such a phrase, the governing substantive is added, the sign of the possessive must be annexed to the last; as, "I called at Smith the bookseller's shop."

4. — If the explanatory circumstance be complex, or consisting of more terms than one, the sign of the possessive must be annexed to the name or first substantive; as, "This psalm is David's, the king, priest, and prophet of the people." "That book is Smith's, the bookseller in Maiden Lane."

5. — When two nouns in the possessive are governed by different words, the sign of the possessive must be annexed to each; as, "He took refuge at the governor's, the king's representative," *i. e.*, at the governor's house.

6. — The *s* after the apostrophe is omitted when the *first* noun has the sound of *s* in each of its two last syllables, and the second noun begins with *s*; as, "For Righteousness' sake," etc. In other cases such an omission would generally be improper; as, "James' book," instead of "James's book."

The following correctly punctuated sentences occur frequently in sign-painting: — "Men's and Boys' Clothing." "Gent's and Youth's Clothing." "Gentlemen and Ladies' Saloon." "Ladies' and Gent's Saloon." "Johnson and Young's Store." "Curtis's Shoe Store." "At Manufacturers' Prices." "Jones & Co.'s Store." "Morris Bros. & Co.'s Store."

SIZING FOR BURNISH-GILDING ON GLASS.

The point to be gained in preparing this sizing is sufficient adhesiveness to hold the gold, but not enough to interfere with a brilliant polish. Several different articles are in use for this purpose, but the most popular, and perhaps the surest, is *Russian fish glue*. Take of this glue a bit about the size of a pea, put it into a clean vessel with a *half pint* of water, and boil for two or three minutes, after which it should be carefully strained, and the result will be a sizing of about the right strength. But as the beauty of the work depends almost entirely on the sizing, *it should never be commenced until the sizing has been thoroughly tested;* for this purpose, any piece of clean glass will answer: flow on a little of the size, and put on a leaf of gold. After it has become dry, rub it carefully with a bit of cotton, and if it present a clear, brilliant look, the size is about right; if it appear dull and dingy, with streaks and spots, it is too strong and needs reducing with water; if the gold rub off, it is too weak and requires a little more glue. These changes can be easily made; but after any alteration the size should be allowed to boil half a minute or so.

OIL SIZING FOR GOLD.

The ordinary gold sizing is usually made with oil which has been allowed to stand until it has acquired a *sticky* property, or become *fat*. What is needed is, of course, an oil which will give the best lustre to the gilding, and still take the gold readily and without trouble. The following is an excellent method of fattening oil: — Pour some very nice boiled linseed oil into a shallow tin pan, stir into it a little *red lead;* put a sheet of glass over the pan, and set it in the sun; the lead will soon be found settled to the bottom of the pan, and it should be stirred every day for two or three weeks; after it has become sufficiently fat, it may be poured off into bottles for use, leaving the red lead on the bottom of the pan. The advantages of this method are, the red lead imparts a drying property to the oil; most of the impurities in the oil will settle with the lead, leaving it clear and beautiful for use, and, being presented to the sun in a shallow vessel, it fats much more readily than it otherwise would.

This oil will be found to dry in about forty-eight hours, but can be made to dry more quickly by the addition of japan. If it should prove too *stiff* to work well, it may be thinned with boiled oil.

QUICK SIZING.

It is rather a difficult matter to prepare a quick size which will work well from the brush and bear out a good polish when the gold is put on. The great difficulty with articles which dry quickly being, that they dry up hard, and leave no tack to hold the gold. It is of prime importance, in making use of quick size, to watch it closely, and put on the gold when it is in just the right condition.

The following receipts for quick size are in common use with sign-painters:

Take the common oil-sizing, and add plenty of japan, and a little quick-drying varnish; if too thin for use, it may be thickened with a little dry chrome yellow. This size will dry in five or six hours.

Number one coach varnish and japan, thickened with dry chrome yellow, makes a size which will usually dry in a warm shop in four or five hours.

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* An illustration of a "light" on a letter may be found on the letter I, on page 11.

Quick-drying furniture varnish and japan and a drop or two of fat oil, thickened with dry chrome yellow, makes a size which will dry in two or three hours.

Asphaltum varnish and dry white lead, with a drop or two of japan, ***thoroughly mixed***, make a size which will dry in ten or fifteen minutes, but must be very closely watched, as after commencing to dry it hardens with great rapidity.

Minot's japan gold size, which may be had of any paint-dealer, thickened with a little dry chrome yellow, will dry in about three minutes, but may be made to dry more slowly by adding a little boiled oil, and is, perhaps, the best article to use for quick size.

TO CLEAN PAINT OFF OLD SIGNS.

To such as find trouble in cleaning the paint and sand off old signs, the following mixture will be of great service:—

Two pounds sal soda, one fourth of a pound of unslacked lime, and one gallon of *warm* water. The warm water is to aid in dissolving the soda and lime, which being accomplished, the mixture can be used cold by spreading it over the surface of a sign, which will soon yield to its influence, and can be easily scraped off and washed. The paint afterwards applied will not be affected by its use.